UNIVERSITY OF CALICUT

Abstract

Faculty of Commerce and Management Studies-Regulations, scheme and syllabus of MBA under Calicut University Credit Semester System (CUCSS) Mode with effect from 2024 -25 admissions Approved -Subject to ratification by the Academic Council- Implemented- Orders Issued

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G & A - IV - E

U.O.No. 9745/2024/Admn   Dated, Calicut University.P.O, 21.06.2024

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*Read:-*1.Item No:1 in the minutes of the meeting of the Board of Studies in Management Studies (PG) held on 29.04.2024.

2.Item No: 4 in the minutes of the meeting of the Faculty of Commerce and Management Studies held on 14.06.2024

ORDER

1. As per paper read as (1) above, the Board of Studies in Management Studies (PG) approved the Regulation and Syllabus of MBA under Calicut University Credit Semester System (CUCSS) Mode with effect from 2024 -25 admissions

2. As per paper read as (2) above, the Faculty of Commerce and Management studies resolved to approve the Minutes of the meeting of the Board of Studies read as (1) above as such.

3. Considering the urgency, the Vice Chancellor approved the minutes of the meeting of the Faculty of Commerce and Management Studies held on 14.06.2024 and accorded sanction on 19.06.2024 to implement the Regulation and Syllabus of MBA under Calicut University Credit Semester System (CUCSS) Mode with effect from 2024 -25 admissions, subject to ratification by the Academic Council.

4. The Regulation and Syllabus of MBA under Calicut University Credit Semester System (CUCSS) Mode with effect from 2024 -25 admissions is, thus, implemented

Orders are issued accordingly (Regulation and Syllabus appended)

Ajayakumar T.K

Assistant Registrar

To

The Principals of affiliated Colleges offering MBA Programme/Co-ordinators of Schools of Management Studies

Copy to: PS to VC/PA to PVC/PA to Registrar/PA to CE/D.R, EPR/EX & EG Sns/Digital wing/SF/DF/FC

Forwarded / By Order

Section Officer

University of Calicut

Regulations of Master of Business Administration (MBA) Programme under CUCSS Mode

Implemented With Effect from 2024-25 Admissions

1.0 Introduction

The Master of Business Administration (MBA) program at the University of Calicut aspires to cultivate individuals into visionary leaders and astute entrepreneurs, poised to confront the dynamic challenges inherent in the ever-evolving global business environment. This overarching goal is pursued through a multifaceted approach, employing various strategic initiatives and a pedagogical framework that places significant emphasis on participatory learning. The redesigned MBA curriculum represents a pivotal advancement, building upon the foundational principles of Outcome-Based Education (OBE) inaugurated at the University of Calicut in the year 2023. This curriculum is meticulously structured to propel the MBA program to a heightened echelon of educational efficacy within the framework of Outcome- Based Education, synergistically aligned with the Credit and Semester System (CSS) regulations of 2020. The integration of OBE within the curriculum substantiates a commitment to clearly delineated learning outcomes, ensuring a comprehensive and structured educational experience.

2.0 Outcome Based Education

Outcome-Based Education (OBE) is an educational philosophy that prioritizes defining specific, measurable outcomes or learning objectives for students. It shifts the focus from what is taught to what students should be able to demonstrate by the end of a course or a program. The benefits of OBE are manifold. It brings clarity to educational goals, providing a transparent framework for both educators and students. This clarity enhances student understanding of expectations and facilitates more effective learning.

OBE fosters a student-centered environment, encouraging active engagement, critical thinking, and practical application of knowledge. The emphasis on measurable outcomes allows for objective assessment and continuous improvement in teaching methods and curriculum design.

Furthermore, OBE aligns education with industry needs, ensuring that graduates possess the skills and competencies relevant to the workforce. In essence, Outcome-Based Education not only enhances the quality of education but also equips students with the tools necessary for success in a dynamic and evolving world.

3.0 Title of the programme

This degree shall be called **MASTER OF BUSINESS ADMINISTRATION (MBA).**

4.0 Programme Outcomes (POs)

Programme Outcomes are the abilities the students acquire at the end of the programme. Programme Outcomes are formulated based on the outcomes which are laid by the National Board of Accreditation (NBA).

The following section states the Programme Outcomes of the MBA provided by the National Board of Accreditation.

PO 1: Apply the knowledge of management theories and practices to solve business problems.

PO 2: Foster analytical and critical thinking abilities for data – based decision making. PO 3: Develop value-based leadership ability.

PO 4: Understand, analyse, and communicate global, economic, legal, and ethical aspects of the business.

PO 5: Lead themselves and others in the achievement of organisational goals, contributing effectively to a team environment.

5.0 Eligibility for Admission

Any student who has passed any degree of the University of Calicut (including degree programmes of SDE/ Open degree programme of SDE, University of Calicut) or that of any other University or institute or institution recognized by the UGC or AICTE. Programmes of other Universities or institutions shall be in 10+ 2+ 3 pattern (or 10+ 2+ 4) under regular stream. In all the cases, the student should have passed the bachelor degree examination with not less than **50 % marks** in aggregate including the marks of languages if any (without approximation, that is, 49.9999 % is not eligible since it is less than 50%), is eligible for admission. However, SC/ST, OBC, and other eligible communities shall be given relaxation as per University rules.

6.0 Admission Procedure

6.1For University Department or its Full time and Part time centres

The admission to the programme shall be made based on the score in the entrance test called CMAT conducted by the All India Council for Technical Education (AICTE) or KMAT conducted by the Admission Supervisory Committee, Govt of Kerala or CAT conducted by a consortium of IIMs and the marks of the Group Discussion and Personal Interview obtained by the candidates in the Plus Two

examination put together in the following proportion:

The rank score shall be arrived at as follows:

Entrance test score	out of **120**
Plus Two marks	out of **30**
Group discussion	out of **25**
Personal Interview	out of **25**
Total	out of **200**

The minimum required test score to be eligible for admission to MBA programme of this University is 10 % of the maximum of the respective entrance examinations for all candidates and 7.5% for SC/ST candidates.

The weightage for Plus Two / PDC shall be based on total marks obtained by the students in all parts, (that is, languages and subjects or Part I, Part II, and Part III). Plus two up to 70% No weightage. For every one percent over and above 70 percent, one mark will be given subject to a maximum of 30 marks for Higher Secondary or equivalent thereof. For calculating this academic weightage, marks obtained in the Plus two/ Higher Secondary / PDC up to 0.49% will be rounded to lower full-digit marks and 0.5 and above will be rounded to the next full-digit marks.

 6.2   A rank list shall be prepared by the University based on the final rank score computed as above and a counseling session shall be conducted for admission to the MBA Programme. While preparing the rank list, if there is the same index mark for more than one candidate, they will be ranked based on the score of the test. Even after this, there is a tie they will be ranked based on actual marks obtained for the Plus Two examination. If a tie exists even after this, the date of birth is to be considered and the elder person is to be given preference in the admission.

The candidates admitted to the MBA programme must produce the qualifying degree mark list/ provisional certificate/ confidential mark list, latest at the last date of closing MBA Admission by the University. If he/she fails to produce the same, his or her admission will be cancelled on the next working day. The University will not be liablefor the loss caused to the student. Reservation of seats shall be followed strictly for admission both in the Department and also at its centres as per the Kerala Government Rules applicable for the professional colleges.

6.3   For Affiliated Management Institutes

For admission to MBA Programme in private management institutes affiliated to Calicut University Clause 6 of the regulation is applicable. Candidates while appearing for the selection must produce valid test score before the selection committee both for merit seats and management quota seats. During the month of **March/April** the University shall invite applications for admission to MBA programme under merit seats. Before the last date of receipt of applications for admissions, the candidate shall have obtained his/her Test Score and the score card shall be submitted along with the application on or before the last date of receipt of filled up application form each year. Based on the Test Score, the candidate shall be shortlisted for Group Discussion and Personal Interview at least thrice the number of seats or the actual number of applicants whichever is lesser shall be the number of candidates invited for Group Discussion and Personal Interview.

6.4   Out of the total seats, 50% shall be Merit Quota (Government Quota) and 50% shall be Management Quota. University shall conduct the Group Discussion and Personal Interview for merit quota seats in self-financing institutes and a common rank list shall be prepared, for all the self-financing institutes. Options will be collected by the university from the candidates during the counseling and will make allotment of candidates to different institutes on the basis of merit and according to the choice of the candidates, keeping all community reservation rules applicable as per rules of Government of Kerala rules. Based on this, allotment letter will be given by the University to the candidates and the college shall give admission to the candidates in themerit quota seats based on the allotment letter.

6.5   If sufficient candidates are not joining in the merit quota seats as per the University allotment letter, the college/institute shall report the matter to the University and with the written permission of the University, the college/institute may fill the seats from the rank list prepared by the University based on the Entrance and GD/PI conducted by the University. The management quota seats shall be filled up after preparing a rank list based on the CMAT score. The private management institutes shall inform the Registrar, University of Calicut and also the Dean, Faculty of Commerce and Management Studies about the entrance test that the institute shall use for ranking candidates for Management Quota seats.

6.6   Admission shall be strictly based on the rank list or lists that the institutes prepare and publish based on the above. The institute shall send one copy each of such rank list or lists of the candidates admitted to the Registrar, University and the Dean, Faculty of Commerce and Management Studies within two weeks of its closing admission each year.

6.7   The University may prepare a calendar of MBA events for admission, class commencement and ending, end-semester university exam, etc. The date of publication of notification inviting applications, last date of receipt of filled up applications, date of admission and commencement of

classes shall be based on the calendar of events for MBA issued by the University.

6.8 Those candidates seeking admission under Merit and Management Quota through tests mentioned in clause 3.1 willing to obtain combined score card from the University shall produce the original test scorecard to the University.

7.0 Medium of Instruction and Examination

The medium of instruction and examination shall be English.

8.0 Schedule and Hours of Lecture

8.1 Duration of the programme

The programme shall have four semesters. Each semester shall consist of 16 weeks. Instruction and University examinations in each course in a semester shall be completed within 90 days in a semester.

Semester	Beginning Month*	Closing month*	Duration
1st Semester	1st August every year	31st January every year	6 months
2nd Semester	1st February every year	31st July every year	6 months
3rd Semester	1st August every year	31st January every year	6 months
4th Semester	1st February every year	31st July every year	6 months

* However, the University has the right to change these schedules according to circumstances.

8.2 Lecture Hours

Each four-credit course shall have four hours and each three-credit course shall have three hours of lecture classes per week. Each 4-credit course shall have a minimum of 60 hours of lecture and each 3-credit course shall have a minimum of 45 hours of lecture in a semester.

9.0 Attendance

A student shall attend at least a minimum of 75 % of the number of classes held for each of the courses in a semester to be eligible for appearing for university examination of that semester. If the student has shortage of attendance in a semester, he or she shall not be allowed to appear for examination of that semester. However, the University may condone shortage up to 10 % of the maximum number of contact hours per semester. This condonation given by the University can be availed maximum of 2 times during the entire programme. If the candidate has shortage more

than this limit, he/she has to compensate the shortage of attendance of that semester along with the next batch and appear for the university examination of that semester.

10.0 Internal Assessment

All courses shall have internal assessment.

10.1 Internal assessment components

The internal assessment will be based on the following components. The total marks to be obtained from the internal assessment is 40 marks. Each faculty shall have the freedom to decide the appropriate percentage of marks for individual components except for tests, which shall be a minimum of 50% of the total internal assessment. However, the following components may be followed by institutions for internal assessment.

Periodic tests (Marks of best 2 out of a minimum of 3 tests)	20 marks (50%)
Mini Project (One)	8 marks (20%)
Seminar	4 marks (10%)
Assignment	4 marks (10%)
Classroom participation and attendance	4 marks (10%)
Total Marks	40 arks (100%)

i) A student should have obtained a minimum of D grade (ie; 20 marks out of the total 40 marks / 50 % of the maximum marks) in internal assessment in each course to be passed successfully in that course.

ii) In case a student fails to get D grade in any course, he or she shall take retest(s)/ submit assignments to the concerned faculty to get the required minimum in that course. Internal assessment has to be completed before the university examination for each semester.

iii) If the student fails to get the required minimum marks in internal assessment despite taking retests or resubmission etc., he or she shall not be allowed to write the University examination in that semester for that particular course.

iv) Such students shall repeat the course along with the successive batch of MBA students to get pass marks in internal assessment and then appear for the University examination in such course.

11.0 Transparency about Internal Assessment

11.1 Each faculty shall maintain record of the performance and attendance of each studentin his or her class course-wise.

11.2 Each faculty shall submit the internal assessment marks of the students to theHead of the department or institution after lecture class in each semester.

11.3 Such internal assessment mark lists shall show all the components separatelyand the total of internal assessment marks awarded to each student.

Format of Internal Assessment Marklist

Sl.No.	Name	Test 1	Test 2	Test 3	Sum of Best 2 tests	Mini Project	Seminar paper & presentation	Attendance	Assignment	Total (40 marks)

11.4 The Department or Centre or Institute shall publish the list of internal assessment marks of all the students within a week of conclusion of the lecture classes in each semester before sending it to the Controller of Examinations.

11.5 The internal marks of the student shall be communicated to Controller of Examinations along with Attendance and Progress Certificate (APC) within two weeks from the last day of class in each semester.

11.6 The faculty shall make available details of the internal assessment marks, with explanations wherever required, to the Head of the Department or Institution in case of grievance regarding internal assessment.

12.0 Procedure for grievance handling of internal assessment

12.1 If the students have any grievance against any member of the faculty, such grievance shall be dealt with at three levels for a solution. First, the concerned student may present the grievance and discuss it with the concerned faculty.

12.2 If the grievance is not solved at the faculty level, the student shall submit a written complaint with all the relevant details to the Head of the Department, center, or institute.

12.3 The complaint shall be dealt with by a Committee of Teachers with the Head of the institute, one senior teacher, and the teacher whose assessment is a matter of dissatisfaction for the student or students.

12.4 If it is not solved at the Department or center or institute level the head of the institution shall forward the written complaint of the student along with the reply of the concerned faculty member to the Controller of Examinations, University of Calicut.

12.5 The student and the faculty member may be invited to present the facts of the dispute in writing before a Committee consisting of the Controller of Examinations, Head, Department of Commerce and Management Studies, University of Calicut and the Dean, Faculty of Commerce and Management Studies of the University. This Committee may take a final decision based on the facts presented by the student(s) and the concerned teacher and the answers they get from them.

13 External Examination

13. 1 The University shall conduct semester-end examinations, carrying 60 marks for all four credits and three credits courses.

13.2 The duration of the examination shall be three hours for all the four credits and three credits courses.

13.3 A student shall register for all the courses in a semester to appear for examination in the respective semester for the first time. The part appearance shall not be allowed for the first appearance.

13.4 Pattern of the University Question Paper

  i.   The examination for the University will consist of a question paper structured to assess students across various cognitive levels as per the revised Bloom's Taxonomy. The paper will have four sections labeled A, B, C, and D, each designed to evaluate different levels of understanding and application.

ii. The maximum mark for a 3 credit paper / 4 credit paper is 60 and the duration is 3 hours.

iii. The question paper for the University examination will have 4 sections, sections A, B, C and D and the questions will be set as per the revised Bloom's Taxonomy knowledge levels.

iv. Section A will comprise five questions, each worth 2 marks, at Bloom's Taxonomy levels 1 and 2. Students must answer all five questions in this section, as they are compulsory. (2*5 = 10 marks)

v. Section B will contain six questions, each worth 4 marks, at Bloom's Taxonomy levels 2 and 3. Additionally, there will be an essential question from a crucial module at level 3. Out of the six questions, students must answer four, as they are compulsory. (4 x 4 = 16 marks).

vi. Section C will include five questions, each worth 8 marks, at Bloom's Taxonomy level 4 and 5. From these questions, students are required to answer three, as they are compulsory. (3 x 8 = 24 marks).

vii. Section D will present a case study or problem question, valued at 10 marks, and will require application at Bloom's Taxonomy levels 5 or 6. Subdivisions within the question are permissible. For instance, there could be two sub-questions worth 5 marks each or five sub-questions worth 2 marks each.For example (2 sub-questions x 5 marks = 10 Marks) or (5 sub-questions x 2 marks = 10 Marks).

viii. The question paper should incorporate approximately 30% revised Bloom's taxonomy Level 1 & 2 questions, 50% revised Bloom's taxonomy Level 3 & 4 questions, and 20% questions at revised Bloom's taxonomy Level 5 or 6.

14.0 Organisational Internship

14.1 The students shall do an internship for 6 - 8 weeks (after Semester 2) in a national or international organization where business systems and practices are established well and streamlined.

14.2 The students shall expose themselves to all prominent areas of management.

14.3 The evaluation of the organization internship shall be internal in a total of 100 marks. The total marks for the organizational internship shall be divided as follows: 60 marks for the Internship Report and 40 marks for the viva voce. The (internal) viva voce should be conducted by a Board of Examiners consisting of one internal faculty and one / two practicing managers.

14.4 A certificate showing the duration of the organization internship shall be obtained from the organization in which the internship was done and it shall be included in the report.

15.0 General Guidelines for Submission of Internship Report

15.1 The structure of the internship report should be as follows:

Chapter 1: Industry Analysis and Company Overview

Industry analysis; History/incorporation of the company; Vision/mission statements, if any; Corporate office/headquarters, number of units; Capital structure, initial investments, shares etc.; Business turn over, profit/loss, market share etc.;

Chapter 2: Organizational Structure and Operations

Organizational structure/hierarchy, employee strength; Products/services/customers/clients; Production process/service operations; Functional departments (like Production, Finance, Marketing, HR, Logistics etc.) and their organization and main activities;

Chapter 3: Business Strategy and Future Plans

Business strategy/policies/functions; Future plans - expansion/diversification;

Chapter 4: Financial Overview, USPs, SWOT

Overview of the financials of the company; USPs/innovative management/Best practices; SWOT analysis and the observations; Any other relevant information gathered through interaction with company managers or data from the handbook, brochure, files or policy documents of the company.

Chapter 5: Summary of Insights from Internship

Summary of insights/outcomes/ Learnings from organisational internship and activities done in the organization.

While evaluating the internship report 60 marks may be distributed in the following order.

No	Chapters	Marks	Allocation of marks
1	Industry Analysis and Company Overview	15	Industry Analysis (3 marks); Company History and Incorporation (3 marks); Vision/Mission Statements (2 marks); Corporate Office/Headquarters (2 marks); Capital Structure and Financials (5 marks)
2	Organizational Structure and Operations	15	Organizational Structure (5 marks); Products/Services/Customers (4 marks); Functional Departments (6 marks)
3	Business Strategy and	10	Business Strategy/Policies (5 marks); Future Plans (5

	Future Plans		marks)
4	Financial Overview, USPs, SWOT	10	Financial Overview (3 marks); USPs and Best Practices (4 marks); SWOT Analysis (3 marks)
5	Summary of Insights from Internship	10	Summary of Insights (7 marks); Integration of Interactions and Additional Information (3 marks)
	Total	60	

For the viva-voce of internship, the total marks of 40 shall be split as follows:

S.No	Criteria	Marks
1	Depth of Knowledge and Understanding	10
2	Critical Thinking and Insights	10
3	Communication and Presentation Skills	10
4	Professionalism and Confidence	10
	Total	40

16.0 Major Project

16.1 The students shall do a major project during their final semester of MBA under a faculty guide, preferably in their area of specialization.

16.2 The faculty guide must have either (a) M. Phil or Ph.D. in Management or Commerce or Economics or (b) two years' MBA teaching experience.

16.3 The duration of fieldwork for a major project is eight weeks.
16.4 This project work is to be done individually by the students.

16.5 The student shall prepare and submit a project report, printed and bound (preferably spiral bound) to the Head of the Department, or Centre or Institute before the last working day of the final semester.

16.6 The head of the institute shall send the projects of all the students together to the Controller of Examinations well in time so that they are received in the Pareeksha Bhavan within two weeks from the last date for project submission to the institute.

16.7 Projects received late shall be forwarded to the Controller of Examinations along with a request for late submission supported by the necessary fee for late submission as fixed by the University.

16.8 However, such late submission shall be done within one month of the last date for final semester

project submission.

16.9 A certificate showing the duration of the project work shall be obtained from the organization for which the project work was done and it shall be included in the project report.

17. Structure of the report (For major projects)

Title page

Certificate of the Head of the Dept. /InstitutionCertificate from faculty guide

Certificate, in original, from the organization (for having done the project work)Declaration

Acknowledgments

Contents

Chapter I: Introduction (Organization profile, Research problem, objectives of the study,Research methodology etc.)

Chapter II: Review of literature / Theoretical profile

Chapters III: Methodology

Chapter IV: Data Analysis and Findings

Chapter V: Summary, Findings, and Recommendations.

Appendix (Questionnaire, specimen copies of forms, other exhibits,etc.)Bibliography (books, journal articles etc. used for the project work).

18.0 Evaluation of Major Project Report

18.1 The comprehensive evaluation of the major project will encompass a total of 200 marks, with the assessment conducted through a dual-stage process comprising both internal and external evaluations. Forty percent of the total marks (80 marks) shall be awarded through the internal assessment by the institution and sixty percent of the total marks (120 marks) shall be awarded through external assessment.

18.2 The total internal marks of 80 shall be split as follows: 40 marks shall be awarded by the faculty guide and 40 marks shall be awarded through an internal viva voce (two-member panel) after the

submission of the draft report. The submission of internal assessment marks by colleges to the university shall adhere to a transparent and objective process, with the assessment being conducted on a total of 80 marks.

18.3 External evaluation by the final semester Board of Examiners appointed by theUniversity for a maximum of 120 marks for the major project in the final semester shall be split as follows: 90 marks for the project report and 30 marks for the viva voce.

18.4 Sum of the marks awarded to each student in the internal evaluation out of 80 marks and the external evaluation out of 120 marks together shall be awarded to the student for the major project.

While evaluating the project report 90 marks may be distributed in the followingorder.

No	Compulsory Criteria	Major Project (Marks)
A	Problem Formulation	20
B	Methodology Adopted	20
C	Analysis of the data	20
D	Clarity of Findings	15
E	Report Writing	15
	Total	90

18.5 Head of the Department or Centre or institute shall send all the projects of final semester students to the controller of Examinations after internal evaluation.

19.0 Viva Voce Examination for Major Project

19.1 At the end of the fourth semester, each student shall attend an external viva voceexamination. Viva Voce examination shall be for 30 marks.

19.2 The Viva Board shall have at least two members. The University shall appoint theexaminers.

19.3 The viva voce will be about the project reports.

19.4 The student should get a D grade (15 marks / 50% of the total) for a pass in viva voce. The total marks of 30 for viva voceexamination shall be split in the following order

a. Clarity of explanation – 10 marks

b. Depth of knowledge   - 10 marks

c. Communication skills and presentation skills – 10 marks

20.0 Minimum credits for Project Report

20.1 The student should get a minimum of 50% marks / D grade (separately in internals and externals) for project reports for a pass in major projects.

20.2 If the student fails to get a D grade for the project report, he or she shall resubmit the project report after modifying it based on the recommendations of the examiners. This can be done immediately after the publication of the results.

21.0 Scheme of Instruction and Examination

21. 1 Semester One

Exam Slot	Course Code	Course Title	Internal Credit	External Credit	Total Credit	Type
A	BUS 1C 01	Business Communication and Soft Skills	1.6	2.4	4	Core
B	BUS 1C 02	Management Theory and Corporate Social Responsibility	1.2	1.8	3	Core
C	BUS 1C 03	Legal Environment of Business	1.2	1.8	3	Core
D	BUS 1C 04	Organizational Behaviour	1.6	2.4	4	Core
E	BUS 1C 05	Environment and Sustainability	1.2	1.8	3	Core
F	BUS 1C 06	Managerial Economics	1.6	2.4	4	Core
G	BUS 1C 07	Quantitative Techniques	1.6	2.4	4	Core
H	BUS 1C 08	Accounting for Managers	1.6	2.4	4	Core
		Total in semester	11.6	17.4	29	

21.2 Semester Two

Exam Slot	Course Code	Course Title	Internal Credit	External Credit	Total Credit	Type
A	BUS 2C 09	Marketing Management	1.6	2.4	4	Core
B	BUS 2C 10	Financial Management	1.6	2.4	4	Core
C	BUS 2C 11	Operations Management	1.6	2.4	4	Core
D	BUS 2C 12	Human Resources Management	1.6	2.4	4	Core
E	BUS 2C 13	Operations Research	1.2	1.8	3	Core

Exam Slot	Course Code	Course Title	Internal Credit	External Credit	Total Credit	Type
F	BUS 2C 14	Data Analytics and Computing	1.2	1.8	3	Core
G	BUS 2C 15	Business Research Methods	1.2	1.8	3	Core
H	BUS 2C 16	Corporate Governance & Ethics	1.2	1.8	3	Core
		Audit Course (Skill Enhancement Programme as per the guidelines from the University)				
		Total in semester	10.6		28	

21.3 Semester Three

Exam Slot	Course Code	Course Title	Internal Credit	External Credit	Total Credit	Type
A	BUS 3C 17	Strategic Management	1.6	2.4	4	Core
B	BUS 3E…..01	Elective 1	1.2	1.8	3	Elective
C	BUS 3E…..02	Elective 2	1.2	1.8	3	Elective
D	BUS 3E…..03	Elective 3	1.2	1.8	3	Elective
E	BUS 3E…..04	Elective 4	1.2	1.8	3	Elective
F	BUS 3E…..05	Elective 5	1.2	1.8	3	Elective
G	BUS 3E…..06	Elective 6	1.2	1.8	3	Elective
	BUS 3C 18	Internship report and viva-voce	1.2	1.8	3	Core
		Total in a Semester	10	15	25	

21.4 Semester Four

Exam Slot	Course Code	Course Title	Internal Credit	External Credit	Total Credit	Type
H	BUS 4C 19	Entrepreneurship	1.6	2.4	3	Core
I	BUS 4E….7	Elective 7	1.2	1.8	3	Elective
J	BUS 4E….8	Elective 8	1.2	1.8	3	Elective
K	BUS 4E….9	Elective 9	1.2	1.8	3	Elective
L	BUS 4E….10	Elective 10	1.2	1.8	3	Elective
M	BUS 4C 20	Major Project and	2.4	3.6	6	Core

		viva-voce				
	BUS 4C 21	Any PG Management Course of 3 Credits of NPTEL/ Online courses approved by the University of Calicut			3	Instead of a classroom elective
		Total in a Semester	10	15	21	

22.0 Specialization Electives:

22.1 Finance

Exam Slot	Course Code	Course Title	Semester
B	BUS 3EF 01	Security Analysis and Portfolio Management	3
C	BUS 3EF 02	Strategic Cost Management	3
D	BUS 3EF 03	Banking and Insurance	3
E	BUS 3EF 04	Forensic Accounting	3
F	BUS 3EB 05	Financial Analytics	3
G	BUS 3EF 06	Project Finance	3
I	BUS 4EF 07	Behavioural Finance	4
J	BUS 4EF 08	Strategic Financial Management	4
K	BUS 4EF 09	International Finance	4
L	BUS 4EF 10	Financial Derivatives	4

22.2 Marketing

Exam Slot	Course Code	Course Title	Semester
B	BUS 3EM 01	Retail Management	3
C	BUS 3EM 02	Consumer Behaviour and Marketing Research	3
D	BUS 3EM 03	Brand Management	3
E	BUS 3EB 04	Marketing Analytics	3

F	BUS 3EM 05	Digital Marketing	3
G	BUS 3EM 06	Integrated Marketing Communication	3
I	BUS 4EM 07	Services Marketing	4
J	BUS 4EM 08	International Marketing	4
K	BUS 4EM 09	Sales and Distribution Management	4
L	BUS 4EM 10	Sustainable and Social Marketing	4

22.3 Human Resources Management

Exam Slot	Course Code	Course Title	Semester
B	BUS 3EH 01	Management of Self and Others	3
C	BUS 3EH 02	Human Resource Planning and Retention	3
D	BUS 3EB 03	HR Analytics	3
E	BUS 3EH 04	Performance Management	3
F	BUS 3EH 05	Compensation and Benefits Mgt	3
G	BUS 3EH 06	Industrial Relations	3
I	BUS 4EH 07	International HRM	4
J	BUS 4EH 08	Management of Change and Org. Development	4
K	BUS 4EH 09	Competency based HRM	4
L	BUS 4EH 10	Management of Training and Development	4

22.4 Operations, Logistics and Supply Chain Management

Exam Slot	Course Code	Course Title	Semester
B	BUS 3EOM 01	Logistics and Transportation Management	3
C	BUS 3EOM 02	Warehouse and Inventory	3
D	BUS 3EOM 03	Service Operations	3
E	BUS 3EOM 04	Lean Management	3
F	BUS 3EOM 05	Operations Strategy	3
G	BUS 3EOM 06	Quality Management	3
I	BUS 4EOM 07	Project Management	4
J	BUS 4EOM 08	Product and Process Design Management	4
K	BUS 4EOM 09	International Logistics	4
L	BUS 4EOM 10	World-class manufacturing	4

22.5 Business Analytics

Exam Slot	Course Code	Course Title	Semester
B	BUS 3EB 01	Python Programming	3
C	BUS 3EB 02	Advanced Statistical Measures using SPSS	3
D	BUS 3EB 03	HR Analytics	3
E	BUS 3EB 04	Marketing Analytics	3
F	BUS 3EB 05	Financial Analytics	3
G	BUS 3EB 06	Artificial Intelligence and Machine Learning	3
I	BUS 4EB 07	Big Data and Cloud Computing	4
J	BUS 4EB 08	Social media, Web and Text Analytics	4
K	BUS 4EB 09	Industry 4.0 and IoT	4
L	BUS 4EB 10	Business Database Systems	4

For all other matters which are not specified in this regulation the common regulation for PG Programme under CUCSS for affiliated colleges will be applicable.

23.0 Time Limit for Completion and Validity of Registration

The registration for MBA shall be valid for five academic years including the academic year of registration. A student is expected to complete all the MBA courses within these five years.

24.0 Failed students

If a student fails in any course or courses, he or she shall reappear in that course or courses in the regular examinations of the respective semester of any of the successive batches of MBA students. If they fail to pass in any course or courses within the five years, then they shall be required to reregister for the course they did not complete by paying the fees fixed by the university and appearing for the university examination.

25.0 Change in Curriculum and Chances for Students

If MBA curriculum change is implemented in any year, the students who registered under the old scheme shall be allowed to appear in those courses in which they failed, subject to a total of three chances and a time limit of five academic years including the academic year of registration for MBA.

26.0 Discontinuation and Re-admission

19

If a student wants to discontinue the MBA programme, he or she can do it provided the student pays the fee as is required by the general regulations of the University. But readmission may be allowed only if the student has completed at least the first semester with a minimum of 75% attendance and has registered for University examinations in the first semester courses, provided the Department, Centre or Instituteagrees to readmit him or her to the next semester of the MBA programme.

27.0 Pass minimum

Each student shall secure a minimum of 50 percent in the university examination for each course for a pass in that course. The classification of results may be as follows:

Letter grade	Range of Grade Point Average	Performance level
A	3.5 to 4.0	Excellent
B	2.5 to 3.49	Very good
C	2.2 to 2.49	Good
D	2.0 to 2.19	Average
E	0.5 to 1.99	Poor
F	Below 0.5	Very poor

28.0 A candidate who passed the courses in the first two semesters in regular sitting or supplementary sittings before the completion of the course and any of the third and fourth-semester papers by taking one supplementary chance after the completion of the course (one chance for third-semester papers and one for fourth-semester papers) shall also be given class/grade, based on the percentage of marks obtained by him or her.

29.0 Specialization

29.1 The curriculum offers dual specialization.

29.2 When selecting elective papers, please adhere to the following guidelines:

> i) Each student must opt for an equal number of papers in each area, totaling five papers for dual specialization. Single specialization is discouraged.

> ii) The papers are categorized into various examination slots numbered from A to L.While choosing the electives in a semester, students should ensure that only one paper from a

particular exam slot (A to L) is chosen as all papers within the same slot will be scheduled for examination on the same day.

29.3 If the student opts for and passes a minimum of five courses in two distinct functional areas, (including the SWAYAM NPTEL credit requirement as per the University guidelines) he or she may be issued mark lists showing dual specialization mentioning the dual functional areas.

29.4 To begin with, the students can be permitted to opt for a 3-credit PG-level MOOC course that is directly related to their area of specialization from SWAYAM NPTEL instead of an elective paper offered in the classroom during semester 4. The student shall pursue the MOOC course during semester 3 or semester 4. However, the student must get approval to enroll for the course from the institution in which they are pursuing an MBA degree. Upon the submission of the transcript and grade for the NPTEL course to the institution before the submission of the semester 4 internal assessment marks in the university portal, the same shall be counted as an elective

29.5 An elective course shall be offered by the colleges only if 10 students are opting that course.

30.0 MBA Part-Time Programme

30.1 All the above provisions apply to the MBA Part-Time Programme. In addition, to be eligible for admission to the MBA Part Time Programme, a candidate should have a minimum of three years' work experience with any organization. In the absence of employed candidates, such seats can be filled by candidates other than employees.

30.2 The duration of the programme shall be **four** semesters spanning over **two** years with a minimum of three hours of lecture on every working day and six hours' lectures on Sundays and Public Holidays. In all semesters the total number of contact hours of the MBA Part-time programme must be equal to the total number of contact hours of the regular MBA Programme.

31.0 Scheme of Instruction and Examination of Part-Time MBA Programme:
It is the same as that of full-time MBA programme mentioned in the regulation

32.0 Model Question paper and Instrcutions regarding the prepration of questions

32.1 Model Question Paper for CUCSS Mode

	SET **XX**		
	UNIVERSITY OF CALICUT …….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR		
	Course Code: …….		
	Course Name: ……………………………………….		
Max. Marks: 60		Duration: 3 Hours	
	PART A		
	Answer all questions, each carries 2 marks.	Marks	Bloom's Taxonom Level
1		(2)	
2		(2)	
3		(2)	
4		(2)	
5		(2)	
	PART B		
	Answer any FOUR questions from this section. Each question carries 4 marks.		
6		(4)	
7		(4)	
8		(4)	
9		(4)	
10		(4)	
11		(4)	
	PART C		
	Answer any THREE questions from this section. Each question carries 8 marks		

12		(8)	
13		(8)	
14		(8)	
15		(8)	
16		(8)	
PART D (Compulsory Question, 10 marks)			
17		(10)	

32.2 Guidelines for Question Paper Setters

i. The examination for the University will consist of a question paper structured to assess students across various cognitive levels as per the revised Bloom's Taxonomy. The paper will have four sections labeled A, B, C, and D, each designed to evaluate different levels of understanding and application.

ii. The maximum mark for a 3-credit paper / 4 credit paper is 60 and the duration is 3 hours.

iii. Section A will comprise five questions, each worth 2 marks, preferably at Bloom's Taxonomy levels 1 and 2. Students must answer all five questions in this section, as they are compulsory. (2*5 = 10 marks)

iv. Section B will contain six questions, each worth 4 marks, preferably at Bloom's Taxonomy levels 2 and 3. Additionally, there will be an essential question from a crucial module at level 3. Out of the six questions, students must answer four, as they are compulsory. (4 x 4 = 16 marks).

v. Section C will include five questions, each worth 8 marks, preferably at Bloom's Taxonomy levels 4 and 5. From these questions, students are required to answer three, as they are compulsory. (3 x 8 = 24 marks).

vi. Section D will present a case study or problem question, valued at 10 marks, and will require application preferably at Bloom's Taxonomy levels 5 or 6. Subdivisions within the question are permissible. For instance, there could be two sub-questions worth 5 marks each or five sub-questions worth 2 marks each. For example (2 sub-questions x 5 marks = 10 Marks) or (5 sub-questions x 2 marks = 10 Marks).

vii. The question paper should incorporate approximately 30% revised Bloom's taxonomy Level 1 & 2 questions, 50% revised Bloom's taxonomy Level 3 & 4 questions, and 20% questions at revised Bloom's taxonomy Level 5 or 6.

viii. The Bloom's taxonomy Level corresponding to each question should be indicated in the

question paper in the column provided

ix. The question paper should incorporate 30% easily comprehensible questions (revised Bloom's Taxonomy Levels 1& 2), 50% moderately challengingquestions (revised Bloom's Taxonomy Levels 3 & 4), and 20% questions with a high level of difficulty (revised Bloom's Taxonomy Level 5 & 6).

32.3 Format to be filled up by the faculty preparing the Question Paper & Scheme

	Details of Question Paper					
1.	Question Paper Code/Sl.No.					
2.	Course Code & Name					
3.	Max Marks & Duration					
4.	No. of Pages					
	Details of the Question Paper Setter					
5.	Name of Faculty					
6.	Designation					
7.	Department					
8.	Name of Institution					
9.	Mobile Number					
10.	e-mail ID					

	Check List to fill out before submitting the question paper Prepare and submit the question paper after checking the specified parameters mentioned in this section					
Sl. No.	**Parameters**	**Correct / Not Correct**				
11.	Course Code & Course Name					
12.	Semester, Month &Year of Exam					
13.	Number of Pages on top of QP					
14.	Max Marks & Duration					
15.	Pattern of Question Paper	Correct / Incorrect				
16.	Numbering of Questions	Correct / Incorrect				
17.	Marking of Compulsory Questions, Choices& Instructions	Correct / Incorrect				
18.	Module-wise distribution of Marks in the Question paper	**Module**	**I**	**II**	**III**	**IV**	**V**
		Marks					
		Percentage					
19.	Clarity of the Questions	Yes / No				
20.	Framing of questions based on the course outcomes mentioned in the syllabus and following the revised Bloom's taxonomy	Yes / No				
21.	Legibility of Figures & Equations	Yes / No				
22.	Duplication of Questions among Parts A / B / C & D	Yes / No				
23.	Repetition of Questions with Previous Years	Yes / No				
24.	Distribution of questions in Theory/Problem following syllabus	Yes / No				
25.	Sufficiency of answer book & Duration of Time	Sufficient / Insufficient				
26.	Overall Difficulty level & Approximate Marks	**Bloom's**		**Bloom's**		**Bloom's**

Distribution (%) The approximate percentage may be L1 & L2 (30%) L3 & L4 (50%) and L5 & L6 (20%)	Taxonomy L1 & L2 (Easy)	Taxonomy L3 & L4 (Moderately difficult)	Taxonomy L5 & L6 (Difficult)
27. Whether the Scheme of Evaluation is sufficient for Valuation	Yes / No		

Signature of the question paper setter:
Date:

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Semester	Course Code	Course Title	Total Credits	Type Elective
1	BUS 1C 01	**BUSINESS COMMUNICATION AND SOFT SKILLS**	4	Core

Introduction:

The course "Business Communication and Soft Skills" stands as a cornerstone in the pursuit of equipping aspiring professionals with the requisite knowledge and competencies to navigate the complexities of modern business environments. This academic endeavour is designed to immerse students in a comprehensive exploration of the multifaceted realm of business communication and the development of soft skills, fostering a foundation upon which future career growth and prosperity can be built.

Course Objectives:

This course aims to foster a comprehensive understanding of the principles and practices of effective business communication, encompassing written and verbal communication, intercultural communication, and the integration of modern communication technologies.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L3	Apply business communication strategies and principles to prepare effective communication for domestic and international business situations
2	L3	Participate in team activities that lead to the development of collaborative work skills and leadership skills
3	L6	Select appropriate organisational formats and channels used in developing and presenting business messages
4	L3	Communicate via electronic mail, Internet, and other technologies and deliver an effective oral business presentation

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	2	0	0	3	0
2	0	0	2	0	3
3	3	0	0	1	2
4	0	0	0	3	2

Module	Syllabus	Hours allotted
1	**Importance of Communication in business:** 7 Cs of effective communication; Principles of Business Communication, Process of Business Communication; Strategies for improving Business Communication effectiveness. Communication challenges in the VUCA world.	12
2	**Types of Organisational Communication:** AIDA Model of persuasive communication; Interpersonal Communication: Email Etiquettes – Anatomy of a professional email; Effective Leadership Communication; Cross-cultural Communication – Hofstede's dimensions of cultural differences, Proxemics, Chronemics, Haptics, Gestures, Body postures, facial expressions, Developing cultural intelligence.	12
3	**Verbal and non-verbal Communication in business:** Public Speaking Skills- Overcoming fear of public speaking, Structure of a Speech: Opening, body, and conclusion; Business presentations –Role of audio-visual aids and computers in oral presentations; Interviewing- Art of negotiation & Listening skills, – Barriers to Listening, Strategies for Active Listening, Relevance of Body language, Rhetoric Triangle, Using PowerPoint effectively; Body Language	12
4	**Written communication:** Writing Process; Writing Business Letters – Formats and Styles of business letters; Types of business letters; Memoranda- Directives and instructions- Notices -Reports; Conducting Meetings-Procedure, Agenda - Proposals -Minutes - Professional papers - Agreement documents -Press releases; Preparation of resumes	12
5	**Group discussion:** Team engagement; Time Management; Speech drafting; Public speaking; Stage anchoring; One to one communication and one to group communication; (include practise sessions).	12
	Total	**60**

References:

➢ Boyee Courtland L and Thrill John V., Business Communication Today, Prentice Hall International.2021.
➢ Atkinson, Business Writing & Procedures, Reynolds American Book Co. 1970.
➢ Mary Ellen Guffey, Business Communication: Process and Product, 5e, South- Western Thomson Publishing, Mason, OH, 2005.
➢ Namita Gopal, Business Communication, New Age International Publishers, New Delhi, 2009.
➢ Penrose and Rasberry, Business Communication for Managers: An advanced approach, 5e, South-Western College Pub, 2007.
➢ Asha Kaul, Business Communication, Prentice Hall of India, New Delhi, 2007.
➢ Harvard Business Essentials: Business Communication, Harvard Business School Publishing 2003.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 1	BUS 1C 02	MANAGEMENT THEORY AND CORPORATE SOCIAL RESPONSIBILITY	3	Core

Introduction:
This course allows the students to learn the basics of principles and practices of Management. Management career, professionals should have an in-depth knowledge of Principles and Practices in management to succeed in career. They should also have the skills necessary to work in organisations. How employees take decisions in organisations will be learned in this course. Based on several theories and practical exposures, students are able to analyse the principles and practices in organisations and behave accordingly.

Course Objectives:

This course is designed to provide students with a comprehensive understanding of the theoretical underpinnings of effective management practices while emphasizing the ethical and social responsibilities that contemporary corporations must shoulder. The course aims to explore key concepts, theories, and case studies that illustrate the evolving role of businesses in society, equipping students with the knowledge and critical thinking skills needed to navigate the complex terrain of modern management and CSR.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Explain the principles and practices of management
2	L3	Explain and evaluate planning, organizing, and Principles and Practices in management
3	L4	Compare and evaluate various leadership theories
4	L4	Evaluate the Directing, Controlling, and Co-ordination aspects in Principles and Practices in Management
5	L 3	Explain the concept of Corporate social responsibility as a principle and practice of management

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	2	0
2	3	0	0	2	0
3	2	0	0	2	0
4	2	0	3	0	1
5	3	0	2	0	0

Module	Syllabus	Hours allotted
1	**Management, Managers, & Workplace:** Meaning, Definition and Nature; Evolution of Management- Management Thoughts - Why study Management, Early Management - Classical Approach - Scientific Management - General Administrative Theory - Behavioural Approach - Quantitative Approach, Management gurus – India – C K Prahalad, Narayana Murthy, Ratan Tata, Shiv Khera, Manager – Managerial Challenges - Skills required for a manager, managerial roles	9
2	**Managerial Decisions:** Making decisions – Process – Approaches to decision making – Types of decisions, Diversity in Workplace - The Changing Workplace - Types of workplace diversity - Challenges in Managing Diversity, Managing Change and Innovation - Living with VUCA – Stimulating and Nurturing Innovation - Implications of disruptive innovation	9
3	**Management Practice: Planning:** meaning, nature, importance, levels of planning. Objectives – setting objectives, Policies – planning premises, types of plans - the process of planning – Contingency Factors in Planning - Contemporary issues in planning, **Organizing:** Designing Organizational Structure - Span of Control - Centralization and Decentralization - Mechanistic and Organic Structures - Factors Affecting Structural Choice. **Staffing:** - Meaning, Nature - HR Planning – Recruitment – Selection. Performance Management- Potential Management, Traditional Organizational Design Options - Organizing for Flexibility in the Twenty-First Century. **Directing:** Principles of Directing – Process - Motivation – Types of motivation – motivational techniques. Delegating – Principles & Process. **Controlling:** System and process of Controlling - Requirements for effective control. Control Techniques - Budget as Control Technique, Information Technology in Controlling. Tools for measuring organizational performance. Work Stress; Role of Yoga for Stress Reduction - Sources and Consequences, Organizational Role	9

4	**Leadership:** Leadership - Early Leadership Theories - Leadership Traits - Leadership Behaviours. Contingency Theories of Leadership - The Fiedler Model - Hersey and Blanchard's Situational Leadership Theory - Path-Goal Model - Contemporary Views of Leadership - Leader–Member Exchange (LMX) Theory. **Team leadership:** Leadership styles in organizations - Leadership and culture - Crisis leadership - Intercultural leadership - Leadership development – Developing effective leadership - Succession planning. **Types of leaders:** Charismatic Leadership - Transformational-Transactional Leadership - Authentic Leadership - Ethical Leadership Servant Leadership - Followership - Leadership Issues in the Twenty-First Century.	9
5	**Corporate Social Responsibility:** Definition and Evolution of CSR, Importance of CSR in contemporary business environment, Stakeholder Theory, Triple Bottom line approach, Challenges and criticisms.	9
	Total	**45**

(Case Studies to be included)

References:

- Fred Lufthans,Organisational Behaviour, McGraw Hill International Edition.2010.
- Koontz &Weirich, Essentials of Management, Tata McGraw Hill Publishing Company, New Delhi.2020.
- Prasad, L.M., Principles of Management, Sultan Chand and Co , New Delhi, 2002.
- Rao, VSP and Krishna, V. Hari, Management: Text and Cases, Excel Books,1st edn. 2004.
- Robbins, S., Organisational Behaviour, 10th edn.., Prentice-Hall India, New Delhi.2018.
- Robbins, S.P., Fundamentals of Management, Pearson, 2003.
- Robbins, Stephen R., Organizational Behaviour, Prentice Hall of India, New Delhi, 1990.
- Stoner, Freeman & Gilbert, Management, PHI, 6th Edition, 2018.
- Terryl Wards Bynum and Simon Rogerson (ed.) Computer Ethics and Professional Responsibility. Wiley Blackwell Publishing, 2003.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 1	BUS 1C 03	LEGAL ENVIRONMENT OF BUSINESS	3	Core

Introduction:

The course "Legal Environment of Business" stands as an essential academic endeavour designed to provide students with a comprehensive exploration of the intricate relationship between the legal system and the corporate world. Through this course, students will embark on a journey into the multifaceted realm of business law, encompassing its foundations, applications, and implications, all with a view to equipping them with the knowledge and skills necessary to navigate the complex legal environment in which modern enterprises function.

Course Objectives:

The course "Legal Environment of Business" is strategically structured to provide students with a comprehensive comprehension of the legal principles and frameworks that govern the operation of businesses, including contract law, tort law, property law, and intellectual property law.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Understand the major laws affecting business operations so as to identify, avoid, and manage legal issues that will be encountered in business
2	L2	Discuss the formalities to be ensured for agreements and contracts and to make use of provisions of the Contract Act & Sale of goods Act while evaluating them.
3	L2	Distinguish between various types of Companies and explain their comparative advantages and disadvantages.
4	L2	Describe the importance of protection of IPR in a global environment.
5	L3	Examine the different legislations like Competition Act, IT Act, Consumer Protection Act and will be able to apply it in the business.

CO – PO Mapping:

CO Number	PO1	PO2	PO3	PO4	PO5
1	3	0	0	2	0
2	3	0	0	2	0
3	3	0	0	2	0
4	3	0	0	2	0
5	3	0	0	1	0

Module	Syllabus	Hours allotted
1	**Introduction to Legal System in India**: The Indian Contract Act 1872 Introduction of legal System; Classification of law, Sources of Law The Indian Contract Act 1872; Offer, Acceptance, Consideration, Agreement, Essential elements of a valid contract, Consent- Coercion, Undue Influence, Misrepresentation, Fraud, Mistake, Provisions Relating to Performance and Discharge of Contracts, Breach of Contract and its remedies, quasi contract	9
2	**Sale of Goods Act**: Limited liability Partnership Act and Negotiable Instruments Act, Sale of goods Act 1930; Sale and Agreement to Sell, Provisions relating to Conditions and Warranties, Caveat emptor principle and its exceptions, Rights of Unpaid Seller, Limited Liability Partnership Act, 2008- meaning of LLP, Differences with traditional partnership and Company, features, benefits, Essentials for Incorporation, procedure, designated partner, Negotiable Instruments Act 1881; Negotiable Instrument,-cheques, Bill of exchange, Promissory Notes, Characteristics, Holder in due course, Dishonour and Discharge of negotiable instruments, Amendments in Negotiable Instruments Act 2010	9

3	**Companies Act 2013**: Company meaning, features and types of companies. Doctrine of lifting the corporate veil, Formation of a Company, Incorporation & Registration Procedure, Memorandum of Association, Articles of Association, Prospectus**,** Capital Subscription- Securities- Shares, Debentures, Issue of shares and bonus shares, rights issue, sweat equity, ESOP**,** Board of Directors, Kinds of Directors and their role, liabilities, Key Managerial Personnel, Woman Director, Resident Director, Duties and responsibilities of Independent Director**,** Meetings – Types of Meeting, AGM, EGM, Class Meeting, Minutes and Resolution.	9
4	**Consumer Protection Act, Competition Act, IT Act:** The Consumer Protection Act, 2019, Introduction, Consumer, Consumer Dispute, Complaint, Complainant, Consumer Protection Council, Consumer Protection Authority Consumer Dispute Redressal Commissions-District, State, National- Jurisdiction & Role. The Competition Act 2002, objectives, features, anti-competitive agreements, types, abuse of dominant position, types, Combination under sec. 5, exceptions, Competition Commission of India, powers, Duties of Director General, Information Technology act, 2000 with amendment act 2008 - Introduction, electronic signature, cybercrimes, electronic records, electronic signature certificate (ESC) Certifying authority, Controlling and certifying authority	9
5	**Intellectual Property Rights**: International Perspective- World Intellectual Property Organization, Categorization, characteristic and differentiation of major Intellectual Properties: Patent, Trademark, Copyright, Geographical Indications, Types of Patent, Rights of Patent Holder, Procedure and Steps in Patent registration, Infringement of Patent. Rights of Trade Mark Holder, Infringement of Trade Mark. Remedies.	9
	Total	**45**

(Case Studies to be included)

References:

➢ Singh, Avtar (2021). Company Law. EBC 17th ed. Eastern Book Company, 2018.
➢ R K.Bangia, Allahabad Law Agency, Contract - I (Law of Contract - I with Specific Relief Act) 2018.
➢ ND Kapoor, Elements of Mercantile Law, 2018.
➢ Bare Act on Competition Act,2002.
➢ Bare Act on Information Technology Act, 2008.
➢ Bare Act on Limited Liability Partnership Act, 2008.
➢ V K Ahuja, Law Relating to Intellectual Property Rights, 2017.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
1	BUS 1C 04	ORGANIZATIONAL BEHAVIOR	4	Core

Introduction:

Although the value of the human facto r has been assumed over the years, only recently has it become a major focus area for theory building, organizational practices and now strategic business development. This course presents selected representative frameworks in individual dynamics (Personality, values, learning, perception, motivation); group dynamics (group and team characteristics, decision making, power, politics); and, organizational dynamics (culture, change, stress). This course puts forth suitable learning outcomes and concludes with effective application.

Course Objectives:

By the end of this course, students will have gained a profound understanding of the behavioral dynamics within organizations and the skills necessary to navigate and contribute positively to the workplace, whether as employees, managers, or future leaders.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Understand the underlying dynamism of individual behavior and the interaction between the individual and the organization.
2	L2	Understand the interpersonal and group/team dynamics and organizational effectiveness.
3	L4	Diagnose and effectively deal with the complex nature of people related issues and problems in organizations.
4	L3	Apply organizational behavior concepts and theories in addressing organizational dynamics and challenges.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	2	0	0	0	3
2	2	0	0	0	3
3	2	0	0	0	3
4	3	0	0	2	0

Module	Syllabus	Hours allotted
1	**Introduction to Organizational Behavior:** Management and Organization (Set the context by introducing the fundamental concepts: organization, manager, functions of manager, management roles, Management skills, importance of interpersonal/human skills and networking); The concept and meaning of OB – Historical perspective of OB, Challenges and Opportunities in applying OB in a changing business environment; Individual Differences: Personality, Abilities, Values, and Attitudes**:** The concepts - Personality frameworks (Big Five, MBTI); Personality Determinants, Different Personality Theories (Psychanalytic, Erickson stages of development); Ability - Intellectual, Physical and Social; Values - Importance of Values - Types of Values; Attitudes: Components, An overview about Job Attitudes: Job satisfaction, job involvement, and organizational commitment.	12
2	**Learning:** The concept, Theories (Classical Conditioning, Operant Conditioning, and Social Learning); How to shape behavior – method of reinforcement; Types (positive, negative, punishment, and extinction); and schedules of reinforcement (continuous and intermittent); Perception: The concept, Factors influencing perception, judging others (attribution theory); Decision making, common biases and errors in decision making; Emotions and Moods: The concepts, Managing emotions at workplace: emotional labor, Affective Events theory, emotional intelligence, emotion regulation).	12
3	**Motivation:** Early theories (Hierarchy of needs theory, Two-factor theory, McClelland's theory of needs); Contemporary theories (Expectancy theory, goal-setting theory, equity theory); Foundations of Group Behavior: Why do people form groups? (Social identity theory, ingroups and outgroups), Stages of group formation: Forming-storming-norming- performing-adjourning); Structural dynamics/properties of work groups (roles, norms, status, size & dynamics, cohesiveness, diversity); Individual performance in groups: social loafing; Group decision making (group think, group shift).	12
4	**Understanding Work Teams:** Difference between groups and teams, Types of teams; How to create effective teams? (Context, composition, and process). Influencing Others: Power: The concept, Power and leadership intertwined, but different, Bases of Power, Dependence: the key to power, Power Tactics; Conflict and Negotiation: The concepts, Types and loci of Conflict, The conflict process. Managing conflict through negotiation, the negotiation process, and Bargaining strategies.	12
5	**Organizational Dynamics:** Organizational change: Contrast the forces for change and planned change, Sources of resistance to change: individual and organizational; how to overcome resistance to change, Approaches to managing organizational change: (Lewin's three-step model, Organizational Development and interventions, Creating Learning Organization); Change and Stress: Potential sources of stress at work, how to manage stress? (Individual and organizational approaches).	12
	Total	**60**

(Case Studies to be included)

References:

➢ Stephen P. Robbins, Timothy A Judge, and Neharika Vohra. Organizational Behavior. Updated 18th Edition, Pearson, 2022**.**

➢ Stephen P. Robbins, Organizational Behavior: Concepts; Controversies; Applications, Prentice-Hall of India, New Delhi,1997.

➢ Fred Luthans, Organizational Behavior, McGraw Hill International, Singapore, 2010.

➢ Debra L. Nelson, James Campbell Quick, Organizational Behavior, South-Western, Thomson, New Delhi, 2012.

➢ Gregory Moorhead, Ricky W. Griffin, Managing Organizational Behavior, Cengage Learning India Private Limited, Delhi, 2014.

➢ Steven L. McShane, Mary Ann Von Glinow, Radha R. Sharma, Organizational Behavior, Tata McGraw Hill Publishing Company Limited, New Delhi.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 1	BUS 1C 05	ENVIRONMENT AND SUSTAINABILITY	3	Core

Introduction:

The course is carefully structured to encompass a diverse array of topics, including environmental policy, conservation, natural resource management, and the promotion of sustainable business practices. By offering an interdisciplinary perspective, it seeks to cultivate a nuanced understanding of the environmental challenges faced on a global scale, while simultaneously emphasizing the significance of local and regional solutions in mitigating environmental degradation.

Course Objectives:

The course "Environment Management and Sustainability" is strategically designed with the objective to develop Proficiency in Environmental Science and Management: To impart a sound knowledge of environmental science, encompassing the understanding of ecological systems, resource dynamics, and the assessment of environmental impacts caused by human activities.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L3	Apply the concept of environment and environmental issues when making business decisions
2	L2	Explain the importance of natural assets, biodiversity and ecosystem services as the foundation of economic and societal well-being.
3	L4	Analyse the ways in which the nature of future can be made more sustainable developments in the context of business
4	L5	Evaluate the importance of Corporate Social Responsibility (CSR) in the context of environment management

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	2	0	0	3	0
2	1	0	0	3	0
3	2	0	0	3	0
4	0	0	3	2	0

Module	Syllabus	Hours allotted
1	**Introduction:** Environment: Components of environment: Lithosphere, hydrosphere, Atmosphere, Biosphere, Ecology, Ecosystem: components- Biotic and abiotic components, Food chain, Biodiversity: Definition, principles, Biodiversity in India.	9
2	**Natural resources and energy management:** Depletion of natural resources, Fossil fuels, Energy sources: Conventional sources, Renewable sources, Energy Management: Definition, Energy management techniques, Energy Audit, global warming, climate change, carbon credit.	9
3	**Environmental degradation:** Impact of industrial and business activities on the environment, Environmental degradation, Industrial pollution – Types and impacts, environmental, economic, and social impacts , Managing industrial pollution, Waste management, Eco-friendly farming and sustainable agriculture, International Environmental issues	9
4	**Sustainable Development:** Definition, elements, indicators, principles, Guidelines for sustainable development, Corporate Social Responsibility and Environmental Management : Environmental aspect of CSR, CSR through triple bottom line and Sustainable Business, Concern for environment: Eco-friendly manufacturing, packaging, Green marketing, Green funding, Green taxes , Environment friendly products	9

5	**Initiatives for Environment Management:** Environment impact assessment: Environment impact studies and assessment, Environment management system, ISO 14000, Environmental legislations, Institutional support for establishing and maintaining environment friendly business, International initiatives for environment management	9
	Total	**45**

(Case Studies to be included)

References:

➢ N K Uberoi, Environmental Management, Excel Books, 2004.
➢ Pandey G.N, Environmental Management, Vikas publishing house, 2009.
➢ Alasdair Blair, David Hitchcock, Environment and Business, Routledge, 2001.
➢ Bruce. W. Piasecki, Kevin. A. Fletcher, Frank. J. Mendelson, Environmental Management and Business strategy, John Wiley & Sons, 1999.
➢ Michael V. Russo, Environmental Management: Readings and Cases, Sage, 2008.
➢ Kiran. B. Chhokar, Mamta Pandya, Meena Raghunathan, Understanding Environment,Sage Publications, 2008.
➢ Aloka Debi, Environmental Science & Engineering, Universities Press, 2008.
➢ Bala Krishnamurthy, Environmental Management: Text and Cases, PHI, 2008.
➢ Arindita Basak, Environmental Studies, Pearson Education, 2009.
➢ Kaushik, Anubha, Environmental Studies, New Age International, 2011.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 1	BUS 1C 06	MANAGERIAL ECONOMICS	4	Core

Introduction:

This course offers students a rigorous academic exploration of the essential principles and concepts that underpin managerial decision-making in a dynamic and often uncertain business environment. Throughout the duration of this course, we will delve into topics such as demand analysis, cost estimation, market structures, pricing strategies, and resource allocation. As we navigate the complex landscape of modern business, this program aims to equip students with the analytical tools and economic insights required to make informed, strategic decisions that enhance the performance and sustainability of organizations.

Course Objectives:

The objectives of the course "Managerial Economics" are multifaceted and encompass both theoretical and practical dimensions. Firstly, the course seeks to impart a deep understanding of economic theories and principles, allowing students to analyze and interpret complex economic data within the context of business management. Secondly, it aims to enable students to apply these economic concepts to real-world managerial decisions, offering insights into optimizing resource allocation, pricing strategies, and market positioning. Moreover, the course endeavors to enhance critical thinking and problem-solving skills, enabling students to assess and respond to economic challenges and opportunities effectively.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Understand and differentiate between various market structures, and describe the characteristics and pricing strategies associated with each.
2	L3	Apply demand and supply analysis to real-world scenarios, make demand forecasts, and evaluate its impacts on pricing and output levels.
3	L4	Analyse the economic policies, including fiscal and monetary policies, and their implications on macroeconomic indicators and business cycles.

4	L5	Synthesize and evaluate economic development models, and contemporary approaches and assess their impact on a nation's economic development

CO – PO Mapping:

CO Number		PO1	PO2	PO3	PO4	PO5
1		3	0	0	1	0
2		3	2	0	0	0
3		0	2	0	3	0
4		2	0	0	3	0

Module	Syllabus	Hours allotted
1	**Managerial Economics: An Introduction** -Definition, Scope and Importance of Managerial Economics; Business Decisions in the context of uncertainty; Concepts: Incremental Concept, Marginalism, Equi-Marginal Concept, Cost-Benefit Analysis; Perspectives: Time perspective – Short run and Long run, Behavioural perspective; Principles: Discounting & Compounding Principle, Opportunity Cost Principle.	12
2	**Demand and Utility Analysis:** Demand, Determinants of Demand, Individual and Market Demand; Law of Demand, Demand Schedule and Demand Curve; Types of Elasticity of Demand, Price Elasticity of Demand; Concept and Types of Utility, Law of Diminishing Marginal Utility; Demand Forecasting & its Techniques. Supply, its determinants, Law of Supply..	12
3	**Production Function :** Cobb-Douglas Production function, Production with One Variable Input, Law of Variable Proportion; Production with Two Variable Inputs; Production Isoquant; Isocost Lines; Estimating Production Functions, Relevance in the context of managerial decisions. Cost Concepts, and Break-Even Analysis - problems	12
4	**Market Structures & Price-Output Determination:** Introduction to Market Structures: Definition and classification of market structures – Perfect competition, Imperfect competition, Monopoly, Duopoly,	12

	Monopolistic Competition, Oligopoly Perfect competition: Definition and Characteristics, Price and output determination under perfect competition Monopoly: Definition and characteristics, Price and output determination under monopoly Monopolistic Competition: Characteristics, Product differentiation, Pricing under monopolistic competition Oligopoly: Characteristics, Types of Oligopoly economy, PriceOutput determination, Fundamentals of Game theory and its application; Price Discrimination: Types, Conditions for successful price discrimination; Application of game theory in realworld scenarios, Comparative analysis of market structures	
5	**Introduction to Macroeconomic Indicators**: Understanding Macroeconomics and Its Importance; National Income and Its Measurement.Inflation, and Business Cycles: Inflation and Deflation: Causes and Consequences; Business Cycles and Their Impact on the Economy. Economic Policies: Fiscal Policies; Monetary Policies.Economic Development Models: Economic Planning and Development Models: Mahalanobis, Harrod-Domar, Kaldor; Contemporary Models and Approaches: The Washington Consensus, Human Development, and Sustainable Development. Human Development Index and Policy Implications: Understanding the Human Development Index (HDI); Policy Implications of HDI and Its Role in Economic Development.	12
	Total	**60**

References:

➢ Dwivedi D.N, Managerial Economics, Vikas Publishing House, New Delhi.2012.
➢ Keat Paul G., Young Philip K Y, Banerjee Sreejatha, Managerial Economics - Economic tools for today's Decision makers, Pearson education.2013.
➢ Ahuja, H. L. A., Managerial economics: Analysis of managerial decision making. S. Chand, New Delhi.2000.
➢ Adhikary,M (2000) Business Economics, Excel Books, New Delhi, 2000.
➢ Chaturvedi, D. D., & Guptha, S. L.,Managerial economics. International Book House,2012.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 1	**BUS 1C 07**	**QUANTITATIVE TECHNIQUES**	4	Core

Introduction:

This course enables the students to know the scientific approach to decision making when solving business problems. Several methods are introduced in applying mathematics to solve management problems quantitatively. Quantitative techniques (QT) are those statistical and programming techniques, which support the decision-making process especially related to industry and business. QT takes into consideration the elements of qualities such as use of numbers, symbols and other mathematical expressions. QT is basically helpful enhancement to judgment and intuition. Quantitative techniques assess planning factors and alternatives as and when they arise rather than suggest courses of action.

Course Objectives:

The course aims to empower students to approach quantitative problems with confidence, providing them with the skills and knowledge necessary to excel in their academic pursuits and professional careers**.**

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L1	Define the basic laws, rules, mathematical and statistical techniques used in quantitative analysis.
2	L2	Articulate the concepts, laws, approaches and tests used in analysing and interpreting quantitative data.
3	L3	Solve problems using various mathematical and statistical techniques.
4	L4	Analyze and evaluate different types of mathematical concepts, data, procedures, and solutions to make judgments and draw conclusions.
5	L5	Validate the findings using statistical techniques from real life scenario.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	1	0	0	0
2	1	3	0	0	0
3	2	3	0	0	0
4	2	3	0	0	0
5	0	3	0	2	0

Module	Syllabus	Hours allotted
1	**Probability:** basic concepts; approaches; theorems- addition, multiplication, conditional and Bayes; business applications of probability.	12
2	**Probability distributions:** random variable; expected value of random variable; Binomial distribution; Poisson distribution, Normal distribution and Exponential distribution.	12
3	**Correlation and regression**: Simple correlation and regression analysis; business application of correlation and regression.	12
4	**Statistical inference**: Basic concepts; standard error; central limit theorem; Sampling and types of sampling; large sample tests, small sample tests; tests for means; tests for proportions; tests for paired observations.	12
5	**Non-parametric tests**: Chi-square test (problems to be discussed), sign test, Wilcoxon, Krushkal Wallis test, Waid – Wolfowitz test; analysis of variance(theory only).	12
	Total	**60**

References:

- Tulsian, P.C. and Vishal Pandey, Quantitative Techniques, Pearson Education, New Delhi 2004.
- Anderson D.R., Sweeney D.J. and Williams T.A., Statistics for Business and Economics, 11th edition, Thomson (South – Western) Asia, Singapore, 2012.
- Ken Black, Applied Business Statistics, 7th Edition, Wiley India Edition, New Delhi, 2012.
- Richard L.Levin and David S. Rubin; Statistics for Management, Prentice Hall of India, New Delhi.2017.
- N.D. Vora, Quantitative Techniques in Management, Tata McGraw Hill, New Delhi. 6. S.P. Gupta: Statistical Methods, Sultan Chand & Sons, New Delhi.2017.
- Hooda, R.P., Statistics for Business and Economics, Macmillan, New Delhi. 8. GC Beri, Business Statistics, Tata McGraw Hill Co, New Delhi, 2013.
- J.K. Sharma, Business Statistics, Vikas Publishing House Pvt Ltd, Noida, 2019.
- C.R. Kothari, Quantitative Techniques, Vikas Publishing House Pvt. Ltd, 2013.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 1	BUS 1C 08	ACCOUNTING FOR MANAGERS	4	Core

Introduction:

The course "Accounting for Managers" is a fundamental academic offering that addresses the essential principles of accounting within a managerial context. Designed to equip individuals with the financial acumen required for effective decision-making and strategic planning, this course delves into key accounting concepts and practices. It enables participants to interpret and analyze financial statements, grasp budgeting and cost control, and gain insights into financial reporting and performance evaluation. With an emphasis on application, this course empowers future managers with the ability to make sound financial decisions, align organizational goals with fiscal strategies, and navigate the intricate landscape of financial management in contemporary business settings.

Course Objectives:

The course "Accounting for Managers" is designed with several paramount objectives. Firstly, it aims to provide participants with a comprehensive understanding of accounting principles, financial statements, and reporting standards. Secondly, the course intends to develop their ability to interpret and analyze financial information to make informed managerial decisions. Thirdly, it seeks to instill proficiency in budgeting, cost control, and performance evaluation, enabling participants to effectively manage financial resources within an organization. Furthermore, the course aims to foster critical thinking and problem-solving skills in the context of financial management. Ultimately, it strives to prepare future managers with the financial acumen necessary to align financial strategies with organizational objectives and navigate the multifaceted landscape of contemporary business finance.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Discuss the fundamental types of accounting, accounting principles and financial accounting process to effectively apply management theories and practices to solve business problems
2	L2	Examine and prepare the financial statements of companies to gain a deeper understanding of the economic aspects of business
3	L4	Analyze the financial performance of companies using ratio analysis, fund flow statement and cash flow statement to provide

		valuable data that is crucial for decision-making within a business context.
4	L3	Apply the principles of cost accounting to classify and identify various elements of cost, such as material, labour, and overhead, in real-world scenarios

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	1	0
2	3	0	0	1	0
3	2	3	0	0	0
4	3	2	0	0	0

Module	Syllabus	Hours allotted
1	**Introduction:** Accounting- Types of accounting (Theory)- concepts and Conventions - GAAP- Accounting Standards–IFRS – Financial accounting process –- Journal-ledger-Trial balance	12
2	**Final Accounts**: Trading and profit and loss accounts & Balance sheet—Adjustment of different items – Corporate financial statements - specimen forms	12
3	**Financial statement analysis**: tools – comparative financial statements, common-size financial statements, trend analysis, Ratio Analysis	12
4	**Fund flow analysis**: meaning of fund – fund flow analysis – the importance of fund flow statement – the difference between fund flow statement and income statement — preparation of the fund flow statements – statement of changes in working capital – computation of fund from the operation – sources and application of funds	12
5	**Cash flow analysis:** Meaning – importance – the difference between cash flow and fund flow statements – cash from operating activities - cash flow from investing activities – cash flow from financing activities – preparation of cash flow statement	12
	Total	**60**

(60% Problem & 40% Theory)

References:

- Gupta R. L. and Radhaswamy M., Advanced Accounting, Sultan Chand Publishers, NewDelhi, 2015.
- Maheshwari S. N., Accounting for Management, 3/e, Vikas Publishing House, New Delhi,2012
- Walter B.Megis, Charles E. Johnson and Robert F.Megis, Accounting the basis for Business Decisions, Tata McGraw-Hill, 1999.
- Shukla, M.C.,Advanced Accountancy, New Delhi, S. Chand & Co.,2016.
- Jain, S.P. &Narang K.L (1998). Advanced Accountancy, Luknow, Kalyani Publishers

SEMESTER 2

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 2	BUS 2C 09	MARKETING MANAGEMENT	4	Core

Introduction:

The course in Marketing Management is structured to achieve a comprehensive array of objectives, to equip students with a deep understanding of marketing principles and practices. Throughout this course, students will acquire a range of vital skills, including the ability to comprehend consumer behavior, develop and execute marketing strategies, and effectively manage marketing programs. This course equips students with essential knowledge of marketing, consumer behavior, market segments & pricing.

Course Objectives:

Key objectives include fostering an understanding of the role of marketing in an organization's success, facilitating the development of competencies in market research, segmentation, and product development, and fostering an awareness of the ethical and legal considerations in marketing practices.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Describe the evolution of the marketing concept, differentiate between the micro and macro environments of marketing, and comprehend the distinctions between domestic marketing and international marketing
2	L3	Apply the knowledge of consumer behavior, buying roles, and decision-making models to analyze and interpret real-world consumer behavior scenarios.
3	L4	Analyse market segmentation, targeting, and positioning strategies.
4	L4	Analyze and critically evaluate complex product and pricing decisions, promotion and distribution strategies.
5	L3	Apply the knowledge of marketing organization and control systems by demonstrating the ability to organize marketing departments effectively

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	1	0
2	3	0	0	2	0
3	3	2	0	0	0
4	3	2	0	0	0
5	3	0	0	0	2

Module	Syllabus	Hours allotted
1	**Introduction to marketing management**: Concept, nature and importance of marketing; Evolution of marketing concept; Marketing environment—Micro environment of marketing and macro environment of marketing –Domestic marketing and international marketing.	10
2	**Consumer behaviour**: Buying roles and behaviour; Individual consumer behaviour and institutional consumer behaviour-- models of buying decision; factors influencing buying decision— cultural ,social, personal and psychological factors—buying process— consumer adaptation process—changing patter of consumer behaviour	12
3	**Market segmentation**: targeting and positioning – levels and patterns of segmentation; effective segmentation; market targeting; positioning methods and strategies. Marketing research - Scope and types of marketing research.	12
4	**Product and pricing decisions**: Concept of product; product line and product mix; new product development; packaging and branding; brand extensions; Pricing decisions factors influencing price decisions; pricing strategies; Product life cycle stages and strategic marketing decisions; Promotion and DistributionPromotion mix; Promotion mix; advertisement budget; media planning; measuring advertisement effectiveness. Sales promotion - objectives, tools and techniques. Distribution channels- physical distribution decisions; channel intermediaries; channel management. Wholesaling and retailing- retail marketing, retail formats	14

5	**Marketing organization and control systems**: organizing marketing department; marketing control techniques- annual plan control, profitability control, strategic control. Product Marketing Vs Services Marketing-Green Marketing-Gender based marketing- Marketing for non business organisation.	12
	Total	**60**

(Case Studies to be included)

References:

➢ Kotler, Philip and Gary Armstrong: Principles of Marketing, Pearson Education, New Delhi, 2004.
➢ Kavitha sharma & Dr. Swati aggarwal: Principles of Marketing, July 2021.
➢ Stanton, W.J., Fundamentals of Marketing, McGraw Hill, New York, 1984.
➢ Saxena, Rajan: Marketing Management, Tata McGraw Hill, New Delhi, 2019.
➢ Kotler, Philip: Marketing Management, Pearson Education, New Delhi, 2017.
➢ Ramaswamy, V.S. and Namakumari S: Marketing Management, Macmillan, New Delhi, 2010.
➢ Rajendra P. Maheswari, Marketing Management, International Book House, 2022.
➢ Neelamegham, S, Marketing in India; Cases and Readings, Vikas New Delhi,2012.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 2	BUS 2C 10	**FINANCIAL MANAGEMENT**	4	Core

Introduction:

This course is designed to provide you with a comprehensive understanding of financial management principles and practices, equipping you with the knowledge and tools necessary to make sound financial decisions, both in personal and professional contexts. Financial management is the art and science of managing financial resources efficiently and effectively to achieve an organization's objectives.

Course Objectives:

The course on Financial Management encompasses a set of overarching objectives designed to equip students with a comprehensive understanding of financial principles and practices. Throughout the course, participants will acquire the knowledge and skills required to analyze, plan, and manage financial resources effectively. Key objectives include fostering an appreciation for the principles of financial management, enabling students to conduct comprehensive financial analysis, develop robust financial plans, and make informed capital investment decisions.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Explain the key objectives of financial management, including wealth maximization, profit maximization, and risk minimization, and recognize their implications on decision-making.
2	L3	Calculate the component costs of capital and apply the concept of leverage in making informed financial decisions regarding capital structure.
3	L4	Analyze and compare various capital budgeting techniques, including payback and discounted payback periods, Accounting Rate of Return (ARR), Net Present Value (NPV), Profitability Index (PI), and Internal Rate of Return (IRR), in terms of their strengths and limitations.
4	L5	Evaluate and Construct a working capital estimation model

	L4	Analyse the dividend policy of a firm
5		

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	1	0
2	2	3	0	0	0
3	2	3	0	0	0
4	0	3	0	2	0
5	2	3	0	0	0

Module	Syllabus	Hours allotted
1	**Nature and Scope of Financial Management**: Meaning and Definition of Business Finance and Financial Management; Finance Functions; Objectives of Financial Management; Financial Decisions; Role and Functions of Finance Manager; Time Value of Money;	12
2	**Investment Decisions**: Capital Budgeting – Investment Evaluation Process -Selection of projects – Techniques of Capital Budgeting – Payback Period-Accounting Rate of Return (ARR)- Net Present Value (NPV), Profitability Index (PI)- Internal Rate of Return (IRR) (Problems).	12
3	**Financing Decisions**: Sources of long-term funds, Concept of cost of capital, Significance of cost of capital, Cost of Different Sources of Capital, Calculation of Cost of Debt; Cost of Preference Share, Cost of Equity and Cost of Retained Earnings, Computation of Composite Cost of Capital.(Problems) Leverage Analysis- Operating, Financial and Composite Leverage (problems)- Measurement of Leverage, Effects of operating and Financial Leverage on profit, Analyzing alternate Financial Plans. Capital Structure decisions: Factors affecting Capital Structure, Concept of Optimum Capital Structure, Theories of Capital Structure, Net Income Approach; Net Operating Income Approach; Traditional Approach and Modigliani-Miller Approach (Theory only); EBIT – EPS analysis. (problems)	12

4	**Management of Working Capital:** Concept, Significance and types of working capital, Factors affecting working capital, Operating Cycle – Estimation of working capital Requirements (Problems) -Source of Working Capital – Financing of Working Capital - Norms of Bank Finance- Committees on Bank finance on Working capital- Cash management, Receivables management and Inventory management (Theory).	12
5	**Dividend Decisions**: Dividend and its forms, Dividend Policy - Objectives of Dividend Policy – Types of Dividend Policy- Theories of dividend- Relevance Theory: Walter's Model- Gordon's Model – Irrelevance Theory: MM Hypothesis.(problems) - Dividend Policy in Practice.	12
	Total	**60**

References:

➢ Brealey, Richard A and Stewart C Myers. Principles of Corporate Finance. McGraw Hill India, 2012.
➢ Brigham, Eugene F and Joel F Houston. Fundamentals of Financial Management (13/e). Cengage Learning, 2012.
➢ Van Horne, J. and Wachowicz Jr., J.M., Fundamentals of Financial Management, New Delhi, Prentice Hall of India, 2008.

➢ Pandey I. M., Financial Management. New Delhi, Vikas Publishing House Pvt. Ltd. 2016.
➢ Chandra, P., Financial Management – Theory and Practice. New Delhi, Tata McGraw Hill Publishing Company Ltd., 2019.
➢ Khan M. Y., Jain P. K., Financial Management – Text and Problems. New Delhi, Tata McGraw Hill Publishing Company Ltd., 2018.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 2	**BUS 2C 11**	**OPERATIONS MANAGEMENT**	**4**	**Core**

Introduction:

This course is designed to provide the students with a comprehensive understanding of the principles and practices of operations management, equipping them with the knowledge and skills necessary to optimize processes, enhance productivity, and drive operational excellence.

Course Objectives:

The course in Operation Management is structured to achieve a comprehensive set of objectives aimed at equipping students with a profound understanding of the principles and practices central to efficient and effective operations within organizations. Throughout this course, students will develop key competencies, including the ability to analyze, design, and improve operational processes, optimize resource utilization, and enhance quality and efficiency.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L4	Analyse Six Sigma and JIT to make a mock-up of how a business can make its production better.
2	L6	Design principles to create innovative product and service designs that meet high-quality standards and consider sustainability factors.
3	L5	Compare and evaluate resource management strategies, making informed decisions to optimize resource allocation, considering efficiency, cost-effectiveness, and global perspectives
4	L3	Apply process management concepts to real-world situations, implementing process improvements, optimizing workflows, and enhancing quality in operational processes.
5	L5	Assess current global trends and emerging technologies in operations management, critically evaluating their impact on businesses and making informed judgments about future prospects and challenges in the field

CO – PO Mapping:

CO Number	PO1	PO2	PO3	PO4	PO5
1	3	0	0	2	0
2	1	2	0	3	0
3	0	3	0	2	0
4	2	3	0	0	0
5	0	3	0	2	0

Module	Syllabus	Hours allotted
1	**Nature, Scope, and Strategic Dimensions of OM:** Introduction to Operations Management - Scope of Operations Management - Strategic Importance - Competitive Priorities - Operations Strategy Matrix - Capabilities - Introducing Capacity and Performance Matrices - Sustainability - Concept of Value chain - Ethical Considerations - Global Dimensions - Current Trends	12
2	**Quality and Design**: Quality Management - Six Sigma - TQM - JIT- Lean Principles - Quality Standards -8 Deadly Wastes -Product Design - Service Design - Design for Quality - Design for Sustainability - Innovations in Design - Concept of Experience Design- Role of Operations Manager (with case study)	12
3	**Resource Management:** Capacity Planning - Resource Allocation - Demand Forecasting - Aggregate Planning - Development of MPS - Resource Procurement - Vendor selection and rating - Materials Management - Inventory Management - P & Q system – Safety stocks – Selective inventory control (ABC, VED etc.) – EOQ (with numerical problems) - MRP - Human Resource Planning - Technology and Automation - Global Sourcing	12
4	**Process Management:** Value analysis/engineering - Value Stream Mapping-Lean Systems - Lean Tools -Process Structure Mapping - Process Improvement - Production and Service Delivery Systems - Layout and Facility Design -Work study concepts- Operations Planning and Control- Work orders, Route sheets, Job cards etc - Scheduling Approaches and Techniques (with Case study) - Theory of Constraints - Line Balancing - Maintenance management concepts	12

5	**Current Global Trends and Applications in OM:** Introduction to Project Management - World class manufacturing- Sustainable Practices – Supply chain Management - Location Decisions - Global Supply Chain Trends - Industry 4.0 - Digital Transformation Introduction to AI and other innovative Technologies - Future Prospects and Challenges	12
	Total	**60**

References:

➤ Lee J. Krajewski, Manoj K. Malhotra, Larry P. Ritzman & Samir K. Srivastava, Operations Management: Process and Supply Chains, Eleventh Edition, Pearson, 2019.
➤ Slack, N., Chambers, S., & Johnston, R., Operations management. Pearson Education, 2010.
➤ Jay Heizer, Barry Render, Chuck Munson &Amit Sachan, Operations Management. Pearson Education, Twelfth edition, 2017.
➤ Mahadevan B., Operations Management: Theory and Practice. Pearson Education India; Third edition, 2015.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
2	BUS 2C 12	HUMAN RESOURCES MANAGEMENT	4	Core

Introduction:

This course aims to help the students to acquire and develop skills to design rational decisions in the discipline of Human Resource Management. It focuses on various functions of HRM, and strategies required to select, develop, and reward manpower resources and also to understand the strategic importance of HRM in the overall business process.

Course Objectives:

The course on Human Resource Management is structured to achieve a comprehensive set of objectives, aiming to equip students with a profound understanding of the principles, theories, and practices underpinning the field of human resources. Throughout the course, participants will develop a range of essential skills, including the ability to attract, select, develop, and retain talent effectively. Key objectives encompass understanding the role of HR in organizational success, developing competencies in personnel recruitment, performance management, and employee relations, and fostering an awareness of the ethical and legal dimensions of HR.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Understand the function of managing human resources at the workplace, the trends, labour codes and competencies required.
2	L3	Apply relevant human resource management practices/functions (human resource planning, training and development, performance management, compensation management, employee relations and discipline etc.) in an organizational context.
3	L4	Analyze the frameworks, methods, and processes implied in HR practices viz. procuring, training and development, performance assessment, remuneration, grievance redressal etc.
4	L5	Evaluate HRM processes and practices helping the organization to formulate HR strategies, to solve HR related challenges, and in turn, to achieve sustainable competitive advantage.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	1	0	0	0	3
2	3	0	0	0	2

3	3	0	0	0	2
4	3	0	0	0	2

Module	Syllabus	Hours
1	**Introduction to HRM**: The concept, importance, line and staff aspects; The trends shaping HRM: Demographics and diversity trends, Job trends, Engagement trends, Globalization trends, Economic trends, Technology trends; Role of Diversity, Equity and Inclusion in HRM. Main aspects of HRM: Distributed HR, Strategic HRM, Performance & HRM, Sustainability & HRM, Employee Engagement and HRM, Ethics and HRM; Competencies of HR manager; Role and Functions of HR manager;	12
2	**Human Resource Planning, Recruitment, and Selection:** - Human resource planning: the concept and process; Job analysis: The concept, uses, process of doing job analysis, Job description, Job specification; Recruitment: Internal and outside sources/methods; Selection: Types of tests, basic types of interviews, how to design and conduct an effective interview;	12
3	**Onboarding, Training and Development, Performance Evaluation:** Employee orientation and onboarding: The concepts, purposes; Training and Management Development Programs: the concepts, Training process model (ADDIE), the training methods (on the job and off the job), Training evaluation Kirkpatrick model; Performance management and Appraisal: the concepts, tools for appraising performance, Appraisal interview/feedback discussion;	12
4	**Compensation:** The concept, direct and indirect financial payments, aligning total rewards with business strategy, equity and its impact on pay rates, establishing strategic pay plans by Job evaluation method, creating a market-competitive pay plan; Pay for performance & Financial incentives: the concepts, individual employee incentive and recognition programs (financial and non- financial); Benefits and Services: pay for time not worked, insurance benefits, retirement benefits, personal services and family friendly benefits, flexible benefits programs; employee productivity and quality of work-life.	12
5	**Career Management, Internal Mobility, Employee Discipline:** The concepts. The manager's role as mentor and career coach, employee retention, Options for internal mobility and exit: promotion, transfer, retirement, dismissal/termination, Discharge, closure, lay off, retrenchment; Employee relations: the concept, ensuring positive employee relations by focusing on employee relations programs; Employee Discipline: the concept, the three pillars of fair discipline, discipline without punishment; How to deal with employee disputes and grievances? Employment Laws: Labour codes on wages, industrial relations, social security and welfare, safety and working conditions.	12
	Total	**60**

(Case Studies to be included)

References:

- Garry Dessler & Biju Varkkey. Human Resource Management, 16e, Pearson, 2020.

- Michael Armstrong, A Handbook of Human Resource Management Practice, Kogan Page, London.2023.

- Robert L. Mathis, John H. Jackson, ManasRanjan Tripathy, Human Resource Management: A South Asian Perspective, Cengage Learning India Private Limited, New Delhi, 2012.

- V.S.P. Rao, Human Resource Management: Text and Cases, Excel Books, New Delhi, 2006.

- P. Jyothi, D.N. Venkatesh, Human Resource Management, Oxford University Press, India, New Delhi, 2006.

- K Aswathappa & Sadhna Dash, Human Resource Management - Text and Cases, McGraw Hill, 2021

- Armin Trost, Human Resources Strategies, Springer, 2020

- Snell & Bohlander, Human Resource Management, Cengage, 2013.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 2	BUS 2C 13	OPERATIONS RESEARCH	3	Core

Introduction:

This course is designed to provide you with a comprehensive understanding of the principles and methodologies of operations research, equipping you with the knowledge and skills necessary to address and solve complex problems in various domains, from logistics and supply chain management.

Course Objectives:

The course in Operations Research is structured to attain a comprehensive set of objectives, with the aim of providing students with a deep understanding of the principles and methodologies essential for addressing complex decision-making problems. Over the course's duration, students will develop key competencies, including the ability to model and analyze real-world problems using mathematical and analytical techniques. Objectives encompass a thorough understanding of foundational concepts, optimization methodologies such as linear and nonlinear programming, network analysis, queuing theory, and decision analysis.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Explain the basic management science techniques and their role in managerial decision-making.
2	L3	Apply the mathematical models for a real life situation to optimize cost and time
3	L4	Analyse various optimization Techniques in Business and Management Applications for completing various projects
4	L5	Know principles of construction of mathematical models

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	1	0	0	0
2	2	3	0	0	0
3	2	3	0	0	0
4	2	3	0	0	0
Module	**Syllabus**				**Hours allotted**

1	**Introduction to Management Science and its phases:** Introduction to Decision Making Process- Types of Decisions – Concept of Modeling and Optimization – Classifications and Types of Models. Linear programming problems: Formulation of the problem, solution by graphical method & simplex algorithm (Simple problems in Maximization only), degeneracy in LPP. Duality in LPP.	10
2	**Transportation and Assignment Problem** - Transportation model and its applications in business problems - without degeneracy. Assignment Model: formulation, methods of solution, Hungarian method	9
3	**Decision theory**: Concepts of decision making, decision making environments, Decision making under uncertainty – Decision making under risk, decision tree	10
4	**Game Theory**: Two-person zero-sum game, saddle point games, principle of dominance, graphical solution. (Theory only) Queuing Theory: Structure, assumptions, uses and characteristics. Simulation: concepts and applications. – Limitations of Simulation (Theory Only)	6
5	**Network Analysis**: Construction of network diagram – CPM - PERT – time estimation, critical path - Basic concepts of crashing	10
	Total	**45**

References:

➢ Hamdy A Taha, An Introduction to Operations Research, Prentice Hall, 2017.
➢ Ronald L. Rardin, Optimization in Operations Research, Pearson Education, 2016.
➢ J.K. Sharma, Operations Research, Macmillan India Ltd., 2008.
➢ G. Srinivasan, Operations Research- Principles and Apllications, PHI Learning, 2017.
➢ Eppen, Gould & Schmidst, Introduction to Management Science Englewood cliffs, New Jersey,Prentice hall Inc., 1992.
➢ Mathur, K and Solow, D, Management Science Englewood Cliffs , New jersey Prentice hall Inc.

➢ Fredrick S. Hiller and Gerald J. Lie Berman, Operations Research concepts and cases, Tata McGraw Hill company, 2007.
➢ R. Panneer Selvam, Operations Research, PHI Learning, 2016.
➢ Rathindra P. Sen, Operation Research, PHI Learning
➢ Billy E. Gilett, Introduction to operations Research, McGraw Hill,1979.
➢ Theirout, R J and Klekamp, R C.,Decision Making Through Operations Research, NewYork, John Wiley, 1975.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 2	BUS 2C 14	DATA ANALYTICS AND COMPUTING	3	Core

Introduction:

This course equips students with essential skills for leveraging data in modern business environments. Covering a spectrum from foundational concepts to practical applications, students explore the significance of Business Analytics, learning to analyze and interpret data, make data-driven decisions, and optimize business performance. Topics include Descriptive, Predictive, and Prescriptive Analytics, using tools like SPSS, R, and Excel Solver.

Course Objectives:

The course on Data Analytics and Computing is designed to achieve a series of comprehensive objectives, fostering students' proficiency in the interdisciplinary field of data analytics. Throughout the course, students will acquire a strong foundation in both the theoretical principles and practical applications of data analytics, including data collection, preprocessing, analysis, and visualization. By the conclusion of the course, students should be adept at harnessing various computing tools and programming languages to manipulate and analyze data effectively, enabling them to derive meaningful insights from complex datasets.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Explain the role of Analytics in various industries and describe current trends
2	L3	Apply techniques of data analytics for visualizing and exploring data using Excel, SPSS and R.
3	L4	Analyze case studies related to the application of Business Analytics in real-world scenarios.

CO – PO Mapping:

CO Number	PO1	PO2	PO3	PO4	PO5
1	3	0	0	1	0
2	2	3	0	0	0
3	2	0	0	3	0

Module	Syllabus	Hours allotted
1	**Introduction to Data Analytics:** Data Analytics – Role of Analytics in Industry– Current trends – Different types of Analytics – Descriptive, Predictive and Prescriptive Analytics - Types of Data – Structured, Semi-structured and Unstructured Data. Scales of Measurement – Nominal, Ordinal, Interval and Ratio. Big data analytics.	8
2	**Descriptive Analytics:** Introduction to Descriptive analytics - Visualizing and Exploring Data - Descriptive Statistics -Sampling and Estimation - Measure of central tendency – Mean, Median and Mode. Measure of Variation – Range, IQR, Variance and Standard Deviation. Measure of Shape – Skewness and Kurtosis (Theory and software application only) Introduction to SPSS, Descriptive statistics using SPSS	8
3	**Predictive Analytics:** Introduction to Predictive analytics - Logic and Data Driven Models - Predictive Analysis Modeling and procedure - Simple Linear Regression. Multiple Linear Regression (Theory and software application only) – Data Exploration and Reduction, Clustering Algorithms – K means and Hierarchical Clustering, Cause and Effect Modelling. Introduction to R programming, Correlation and Regression using R	10

4	**Prescriptive Analytics:** Introduction to Prescriptive Analytics - Prescriptive Modeling -Gradient descent -Linear and Non-Linear Optimization (Theory and software application only). Demonstrating Business Performance Improvement.	10
	Introduction to Excel solver, Optimization using Excel solver	
5	**Application and compliance:** Importance of Analytics in Finance, Marketing & HRM, Ethics in Business Analytics -Data Privacy and Security, Regulatory Compliance. Case discussion.	9
	Total	**45**

References:

➤ U. Dinesh Kumar, Business Analytics: The Science of Data - Driven Decision Making, Wiley, 2017.
➤ Foster Provost & Tom Fawcett, Data Science for Business, O'reilly, 2013.
➤ James R. Evans, Business Analytics - Methods, Models and Decisions, Pearson Ed, 2012.
➤ Kiran Pandya, Smruti Bulsari, Sanjay Sinha, SPSS in Simple Steps, Dreamtech Press India Pvt. Ltd. 2011.
➤ William Fischer, Excel: Quick Start Guide from Beginner to Expert, 2016.
➤ Seema Acharya, Data Analytics Using R, McGraw Hill publication, 2018.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 2	BUS 2C 15	BUSINESS RESEARCH METHODS	3	Core

Introduction:

In order to make informed decisions, solve complex problems, and remain competitive, organizations rely on sound research and analysis. Business Research Methods is a vital discipline that empowers professionals and scholars to gather, analyze, and interpret data to drive meaningful insights and strategies.

Course Objectives:

The course on Business Research Methods is designed to achieve a set of essential objectives aimed at providing students with a comprehensive understanding of the principles and practices of business research. Throughout the course, students will be expected to gain proficiency in the fundamental concepts and methodologies of research, encompassing research design, data collection, and analysis techniques. By the end of the course, students should be capable of formulating relevant research questions, planning and executing research projects, selecting appropriate data collection methods, conducting rigorous data analysis, and effectively communicating research findings.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Describe the key concepts associated with Research methods and methodology
2	L2	Explain different types of research methods and various types of measurement scales and their application in the context of business research
3	L3	Apply the research concepts in completing
4	L4	Analyze and present quantitative data and derive actionable inferences from the same from a decision making perspective
5	L6	Design and develop appropriate hypotheses according to the research problems and write reports

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	1	0	0	0
2	3	1	0	0	0
3	2	3	0	0	0
4	2	3	0	0	0
5	2	3	0	2	0

Module	Syllabus	Hours allotted
1	**Nature and Scope of Research Methodology***:* Meaning and applications of research**,** Importance of research in managerial decision making**,** Business problems and Types of research problems**,** Methods of Research Scope and Limitations	9
2	**Research Process and Research Design:** Research Process**,** Problem Formulation and statement of research problem**,** Importance of Literature Review**,** Types of research designs- Exploratory, Descriptive, Diagnostic/Conclusive and Experimental designs**,** Sampling and sampling designs	9
3	**Data Collection:** Observational and Survey methods**,** Design and development of tools of data collection**,** Scales of Measurement Questions of validity and reliability	9
4	**Data Analysis:** Data cleaning and data coding**,** Analysis and interpretation of data- Univariate analysis, bivariate analysis, Correlation and Regression**,** Testing of hypothesis- applications**,** Parametric tests- t-test, One-way ANOVA, two-way ANOVA and Non parametric test - Chi-square test.	9

	Introduction to non-parametric tests, Use of Statistical software Package SPSS	
5	**Reporting of research work, Publications in Journal and Conferences:** Types of research reports, Stages of Research Report writing, Format of reports; Parts of Research Reports, Publications in Journals and Conferences, Citation, H Index, Impact factor, Indexing.	9
	Total	**45**

References
➢ Wilson, Jonathan, Essentials of Business Research, Sage, 2010.
➢ Alan Bryman & Emma Bell, Business Research Methods (3rd Edn.), Oxford University Press, 2011.
➢ Kothari, C.R., Research Methodology - Methods & Techniques, New Age International, 2019.
➢ O.R. Krishnaswami & M. Ranganatham, Methodology of Research in Social Sciences, Himalaya Publishing, 2011.
➢ Panneerselvam, Research Methodology, Prentice Hall of India, 2013.

➢ Alan Bryman, Business Research Methods,4e (Ie), Oxford University Press. 2018.
➢ Mark N.K. Saunders, Lewis, Thornhill,Research Methods for Business Students, Pearson, 2015.
➢ Earl R Babbie, The Practice of Social Research, 13th edition, OUP, 2017.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 2	BUS 2C 16	**CORPORATE GOVERNANCE AND ETHICS**	3	core

Introduction:

The expected outcome of the course is to elucidate the historical development and pioneers of corporate governance, explain and critically examine the corporate governance system, principles, models and theories of corporate governance ethics in organisations in India and abroad, and critically discuss the problems of corporate governance and identify its stakeholders in the business sector.

Course Objectives:

The objectives of the course "Corporate Governance and Ethics" are to provide students with a comprehensive understanding of the fundamental principles, practices, and challenges associated with corporate governance and ethical decision-making within the realm of modern business. This course aims to equip students with the knowledge and analytical skills necessary to critically assess corporate governance structures, codes of conduct, and regulatory frameworks.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L 2	Elucidate the Corporate governance system, its historical development, and principles.
2	L 5	Evaluate the importance of effective leadership for good governance using case studies of companies
3	L2	Explain and contrast the models and theories of corporate governance.
4	L5	Evaluate the governance issues and identify its stake holders in the corporate sector.
5	L 5	Elucidate the importance of ethical concepts in business.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	0	0	1	3	0
2	0	0	3	2	0
3	3	0	1	0	0
4	2	0	0	3	0
5	0	0	2	3	0

Module	Syllabus	Hours allotted
1	**Corporate Governance**:Meaning, definition, History of Corporate Governance, Characteristics of Good Governance, 4 Ps of Corporate Governance, Consequences of failure of Corporate Governance System	9
2	**Models of Corporate Governance** : Anglo Saxon – German - Japanese – Control – Indian Model Principles of corporate governance.Theories of Corporate Governance – Agency Theory -Stewardship Theory – Resource Dependency Theory – Stakeholder Theory – Transaction Cost Theory – Political Theory. Effective leadership for good Governance – Qualities of effective leadership and its impact on good governance, Stake Holders of Corporate Governance – Obligations.	9
3	**Legal aspects of CG**: SEBI Act – Companies Act – Clause 49 of Listing Agreement, Standardisation of CG, Corporate Governance Committees	9
4	**Development of CG in various countries:** Pioneers in CG practices, Emergence of CG issues in India – Implementation of Birla Committee recommendations., Landmark cases in corporate frauds in recent years – Enron – World com – AIG Insurance – Baring Bank – Lehman Brother-Satyam - Tata – Sahara – Harshad Mehta – Mundra.	9

| 5 | **Ethics:** Meaning - Objective. Business ethics – Characteristics – Need – Evolution – Arguments against Business Ethics.Views of Business Ethics – Unitarian – Separatist view- Integration view - Concept of ethics in work-life. Ethics and Information Technology: Ethical issues relating to computer applications; security threats – computer crime- computer viruses- software piracy- hacking – computer crime prevention. Managers and Ethical Behaviour – Encouraging Ethical behaviour in organisations - Current Issues in Ethics - Organizational moral standards and the ethical dilemmas of decision-making | 9 |
| | **Total** | **45** |

(Case Studies to be included)

References:

➢ SK Bhatia, Business Ethics and Managerial Values, Deep and Deep, 2002.
➢ CVS Murthy, Business Ethics and Corporate Governance, Himalaya Publishing House, 2013.
➢ SK Mandal, Ethics in Business and Corporate Governance, Tata Mc Graw Hill, 2017.
➢ Manisha Paliwal, Business Ethics, New Age International Press. New Delhi, 2006.
➢ Patrick J. A. & Quinn J. F. Management Ethics, Response Publishing, New Delhi, 1997.
➢ C. Fernando, Corporate Governance: Principles, Policies and Practices, Pearson Education India, 2018.
➢ Peter .G. Northouse, Leadership: Theory and Practice , SAGE Publications India Pvt. Ltd., 2016.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 3	BUS 3C 17	**STRATEGIC MANAGEMENT**	4	Core

Introduction:
Strategic management is the art and science of formulating, implementing, and evaluating cross-functional decisions that enable organizations to achieve their long-term objectives. In an era of profound global competition and rapid technological advancements, mastering the principles and frameworks of strategic management is not only essential but also transformative for individuals seeking to navigate the complex landscape of modern business. This course will provide the students with a comprehensive understanding of the fundamental concepts, theories, and practical applications that underpin the development of effective organizational strategies .

Course Objectives:
The course on Strategic Management is designed to achieve a set of comprehensive objectives aimed at equipping students with a deep understanding of the discipline and the ability to apply its principles effectively. Throughout this course, students will develop the knowledge and skills necessary to analyze and assess an organization's external and internal environments, formulate coherent and sustainable strategic plans, and implement strategies that enhance organizational competitiveness.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Describe the principles of strategy formulation, and implementation and control in organizations by the top management
2	L 3	Demonstrate a clear understanding of the concepts, tools & techniques used by executives in developing and executing strategies and will appreciate its integrative and interdisciplinary nature.
3	L 6	Devise strategic approaches to managing a business successfully in a global context
4	L 6	Generate new ideas and create plans and proposals relating to strategic Management.
5	L 6	Develop and prepare organizational strategies that will be effective for the current business environment

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	1	0	0	0
2	1	3	0	0	0
3	2	2	0	3	0
4	1	3	0	2	0
5	2	2	0	3	0

Module	Syllabus	Hours allotted
1	**Introduction to strategic Management:** Past, Present and Future Strategic Management Models – Objectives, Goals – How it is formulated Business Vision, Mission - Strategic Intent Characteristics of Vision, Mission - Firm Resources and capabilities, Value Creation and Value Chain Competitive Advantage, Core Competency	12
2	**Growth Strategies:** Corporate Diversification Strategy, achieving growth through Acquisitions, Making Strategic Alliances Work, Internationalization Strategies Business Environment; Environmental Appraisal and Scanning Techniques; EFE Matrix Strategic Business Units (SBUs), Corporate Portfolio Analysis, BCG Matrix, GE Nine Cell Matrix, Hofer's Matrix, Strategic Choice	12
3	**Foundations of Strategy Formulation**: Planned vs. Emergent Strategy Environmental Uncertainty and Strategic Planning, Scenario Planning, Industry Analysis: Porter's five Forces Organizational analysis: SWOT, PESTEL, ETOP, and QUEST. Strategy Implementation: Balanced Scorecard, Strategy and Organizational Structure.	12
4	**Project, project appraisal, evaluation and PLC:** Strategy Evaluation and Control -Models in Strategic Management: Red Ocean Vs Blue Ocean Strategy, VRIO Framework, 7 s of Strategy.	12
5	**Operations Control and Strategic Control:** Management Control, Budgetary Control - Criteria for Strategy Control –Mechanism for Strategic Control- Du Pont's control model Strategic Surveillance, Strategic Audit.	12
	Total	**60**

(Case Studies to be included)

References:
- Huge McMillan, Strategic Management, Oxford University, Oxford University Press, 2000 ·
- P.S Rao, Business Policy and Strategic Management, Himalaya publications, New Delhi, 2017.
- Azhar Kazmi & French, Strategic Management, Tata McGraw Hill, 2020.
- Charles W.L. Hill and Gareth R. Jones, Strategic Management: An integrated Approach, Cengage Books, New Delhi, 2012.
- Srivastava R M., Strategic Management: Concepts, Skills and Practices., Prentice Hall of India, 2012.
- Business Policy and Strategic Management, McGraw Hill. Himalaya,2000.
- Jauch.L. Rajive Gupta & William.F. Glueck, Strategic Management, Gregory G. Dess and Alex Miller, McGraw Hill,1996.

➤ Harold Koontz, Heinz Weihrich, Mark V. Cannice, Essentials of Management - An International, Innovation and Leadership Perspectiv, McGraw Hill Education (India) Private Limited, 2020.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
4	BUS 4C 19	ENTREPRENEURSHIP	3	Core

➤ Harold Koontz, Heinz Weihrich, Mark V. Cannice, Essentials of Management - An International, Innovation and Leadership Perspectiv, McGraw Hill Education (India) Private Limited, 2020.

Introduction:

The course "Entrepreneurship" offers students a dynamic and forward-thinking exploration of the intersection between entrepreneurial endeavors and the innovative problem- solving methodology of design thinking. This comprehensive program is designed to provide students with a profound understanding of the entrepreneurial process, covering topics such as opportunity recognition, business model development, and venture creation.

Course Objectives:

The objectives of the course "Entrepreneurship" are multifaceted. This course seeks to impart a comprehensive understanding of entrepreneurship, encompassing the entire entrepreneurial process from idea generation to business model development and venture creation.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels	Course Outcomes
1	3	Develop an entrepreneurial mind-set by learning key aspects of entrepreneurship
2	6	Design business plans which are suitable for funding by considering all dimensions of business.
3	2	Comprehend entrepreneurial process by way of studying different case studies of successful entrepreneurs
4	2	Explain the position of Indian entrepreneurship firms in global environment
5	1	Expose the student with state-of-the-art perspectives, ideas, concepts, and solutions related to the design and execution of projects using design thinking principles

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	2	0	0
2	2	3	0	2	0
3	2	0	2	0	0
4	2	0	0	2	0
5	1	3	0	0	0

Module	Syllabus	Hours allotted

1	**Entrepreneurship**: concept and Definitions, Key attributes/skills of an entrepreneur, myths and realities of entrepreneurship, Types of entrepreneurs; role of entrepreneur in economic development - Entrepreneur and Professional manager Intrapreneurship- concept, corporate practices, select cases Social entrepreneurship, rural entrepreneurship and women entrepreneurship, Family businesses	9
2	**Entrepreneurship Theories:** Innovation Entrepreneurship theory, Economic Entrepreneurship theory, Sociological Entrepreneurship theory, Psychological Entrepreneurship theory. Innovation- Process and techniques, Innovation, and invention Types of innovation – Innovation cases	9
3	**Entrepreneurial Development**: Entrepreneurial Development Programmes (EDPs): Need and objectives of EDP. Institutional Support systems for small entrepreneurs - DIC, SFCs, Commercial Banks, SIDBI, Entrepreneurship Development Institutes (EDIs) Entrepreneurship development indicators at global level, Start-up: meaning, start-up policies, start-up revolution in India and Kerala	9
4	**Identification of Business Opportunity & Project Financing**: Market survey and opportunity identification, Preparation of Feasibility Report – market, Financial, Technical feasibility studies, Social cost benefit Analysis – Project Formulation – Common Errors in Project Formulation, Project Financing: Financing of projects, Business plan and project report preparation.	9
5	**Design Thinking**: Skills - Principles of Design Thinking,The Basis for Design Thinking - The Design Thinking Team, Design Thinking Frameworks, Ideation tools – brainstorming, innovation heuristics, behaviour models, overcoming cognitive fixedness, Use of Diagrams and Maps in Design Thinking – Empathy map. Affinity diagram, mind map, journey map, combining ideas into complex innovation concepts.	9
	Total	45

References
- Gupta C . B. & Srinivasan, Entrepreneurship Development in India, Sultan Chand. 2010
- Robin Lowe and Sue Marriott, Enterprise: Entrepreneurship and Innovation: Concepts, Contexts and Commercialization, Butterworth-Heinemann, 2006.
- John Bessant and Joe Tidd, Innovation and Entrepreneurship, John Wiley and Sons, U.K, 2011
- Vasant Desai, Project Management and Entrepreneurship, Himalayan Publications, 2011
- Vasant Desai, Entrepreneurship and Management of Small and Medium Enterprises, Himalayan Publications, 2011
- Gupta A., Indian Entrepreneurial Culture, New Age International, 2011
- Roger Martin, "The Design of Business: Why Design Thinking is the Next Competitive Advantage",Harvard Business Press , 2009.
- Hasso Plattner, Christoph Meinel and Larry Leifer (eds), "Design Thinking: Understand – Improve– Apply", Springer, 2011

SET 1

UNIVERSITY OF CALICUT

………………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 1C 01
Course Name: BUSINESS COMMUNICATION AND SOFT SKILL

Max. Marks: 60		Duration: 3 Hours

PART A		
	Answer all questions, each carries 2 marks.	Marks
1	What are the Principles of Business Communication?	(2)
2	Write about Interpersonal Communication	(2)
3	Role of audio-visual aids and computers in oral presentations	(2)
4	What are the Formats and Styles of business letters?	(2)
5	Drafting of speech is important Why?	(2)
PART B		
Answer any FOUR questions from this section. Each question carries 4 marks.		
6	Importance of Communication in business -7 Cs of effective communication	(4)
7	How to make Leadership Communication more effective?	(4)
8	The relevance of Verbal and non-verbal Communication in business	(4)
9	Different Types of business letters	(4)
10	Group discussion tactics	(4)
11	Interviewing- Art of negotiation & Listening skills	(4)
PART C		
Answer any THREE questions from this section. Each question carries 8 marks		
12	Describe the Communication challenges in the VUCA world.	(8)
13	Explain the AIDA Model of persuasive communication	(8)
14	Write in detail about Business presentations and Relevance of Body language	(8)
15	Different Types of business letters	(8)
16	Tips for Time Management	(8)
PART D (Compulsory Question, 10 marks)		
17	Public Speaking Skills- Overcoming fear of public speaking, Structure of a Speech: Opening, body, and conclusion	(10)

SET 1

Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)

UNIVERSITY OF CALICUT …………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 1C 01
Course Name: BUSINESS COMMUNICATION AND SOFT SKILL

Max. Marks: 60		Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		The Three-Step Process- Plan- Write- Complete	(2)
2		Soft skills refer to a cluster of personal qualities, habits, attitudes and social graces that make someone a good employee and compatible to work with. Interpersonal abilities Empathy, Leadership, Communication Teamwork	(2)
3		Reinforce with Visualization, Audience retain more if hear and see	(2)
4		Letters are brief written messages sent to customers and other recipients outside the organization. Reports and proposals are usually longer than memos and letters, although both can be created in memo or letter format.	(2)
5		Good organization helps your audience in several ways: It helps your audience understand your message. By making your main point clear at the outset, your well-organized message will satisfy your audience's need for information.	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Effective communication affects processes, efficiency, and every layer of a company. Organizations with connected employees have a spike in productivity of up to 25%. How would a 25% productivity lift impact your company's success? Would you see a revenue increase? Better customer service and hence, happier customers? Higher profits?	(4)
7		This requires excellent discrimination and close attention to the nuances of emotional signals. When we are being truly empathetic, we feel what they are feeling.	(4)
8		Effective business communication is how employees and management interact to reach organizational goals. Its purpose is to improve organizational practices and reduce errors	(4)
9		Business letters are formal documents that convey information predominately to stakeholders of business.	(4)
10		First, there is nothing wrong with being quiet. At the same time, you don't want to be too quiet. However, speaking too much is not recommended.	(4)
11		Be prepared to talk about yourself and your experiences Master the art of storytelling Provide specific and concrete examples of your results/accomplishments	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		VUCA is a practical code for awareness and readiness defining a set of conditions in which decisions are made. Ambiguity describes the haziness of reality, the potential for miscommunication, and the mixed meanings of conditions.	(8)
13		The AIDA model of Communication: - AIDA stands for Attention, Interest, Desire, and Action, and is a widely used communication framework in marketing and advertising. It outlines a series of stages that a communication message should ideally go through to persuade and influence the audience.	**(8)**
14		A business presentation uses public speaking and visual materials to communicate important information to a group of professionals, such as co-workers, supervisors, managers and investors. An effective business presentation goes beyond lecturing and contains elements similar to a story. Body language is a range of nonverbal signals that you can use to communicate your feelings and intentions. These include your posture, facial expressions, and hand gestures. Your ability to understand and interpret other people's body language can help you to pick up on unspoken issues or feelings.	(8)
15		Whenever you need to communicate with another company or share important news, **business letters** can present your message in a classic, polished style. Unlike internal memos, business letters are usually written from one company to another, which is why they're so **formal and structured**. However, letters are also quite versatile, as they can be used for official requests, announcements, cover letters, and much more	(8)
16		The ability to manage your time effectively is important. Good time management leads to improved efficiency and productivity, less stress, and more success in life. Here are some benefits of managing time effectively	(8)
		PART D (Compulsory Question)	
17		- Nervousness Is Normal. ... - Know Your Audience. ... - Organize Your Material in the Most Effective Manner to Attain Your Purpose. ... - Watch for Feedback and Adapt to It. ... - Let Your Personality Come Through. ... - Use Humor, Tell Stories, and Use Effective Language. ...	(10)

		• Don't Read Unless You Have to.	

SET 1
UNIVERSITY OF CALICUT ………………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS1C 02
Course Name: Management Theory

Max. Marks: 60		Duration: 3 Hours

PART A	
Answer all questions, each carries 2 marks.	Marks

1	Define Management	(2)
2	Describe VUCA and its implications on Management	(2)
3	Explain the role of Yoga for stress reduction	(2)
4	Recall the leader–member exchange theory.	(2)
5	Explain the term span of control.	(2)

		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Explain the management challenges of the 21st Century.	(4)
7		Compare the different organizational structures, the advantages and disadvantages	(4)
8		Describe the skills required for different managerial roles.	(4)
9		Illustrate the different motivational tools for organizations.	(4)
10		Describe the role of succession planning in corporates	(4)
11		Elicit the importance of strategic leadership in organizations.	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 6 marks	
12		Compare and contrast between the Behavioural Approach and the Quantitative Approach.	(8)
13		Formulate a method of addressing the challenges in Managing Diversity	(8)
14		Write a note on the contemporary issues in the planning of premises.	(8)
15		Evaluate the role of Budget as a Control Technique	(8)
16		Identify the Leadership Issues in the Twenty-First Century.	(8)
		PART D (Compulsory Question)	
17		Bata case study	(10)

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT …………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 1C 02
Course Name: Management Theory

Max. Marks: 60			Duration: 3 Hours
		PART A	

		Answer all questions, each carries 2 marks.	Marks
1		Definition – 2 marks	(2)
2		VUCA: Volatility, Uncertainty, Complexity, Ambiguity. Requires adaptive leadership, strategic agility, and resilience in management. - 2 marks	(2)
3		Yoga alleviates stress through mindful movements, deep breathing, and fostering mind-body connection for relaxation and balance. – 2 marks	(2)
4		Leader-Member Exchange (LMX): Focuses on unique relationships between leaders and followers, impacting performance and satisfaction. – 2 marks	(2)
5		Number of subordinates a manager supervises directly, influencing efficiency and communication – 2 marks	(2)

		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Any four challenges explained – 4 marks	(4)
7		Any three organisational structure with one advantage and disadvantage – 4 marks	(4)
8		Any four points – 4 marks	(4)
9		Any four motivational tools explained – 4 marks	(4)
10		Any four points explained – 4 marks	(4)
11		Any four points explained – 4 marks	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		Four points – Behavioural approach – 4 marks Four points – Quantitative approach – 4 marks	(8)
13		Method identification – 4 marks Explanation on how that method helps in managing diversity – 4 marks	**(8)**
14		Any six-seven points – 8 marks	(8)
15		Any six-seven points – 8 marks	(8)
16		Any six-seven points – 8 marks	(8)
		PART D (Compulsory Question)	
17		Depending upon the number of questions 10 marks can be divided equally	(10)

SET 1	
UNIVERSITY OF CALICUT …………………. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR	
Course Code: BUS 1C 03	
Course Name: Legal Environment of Business	

Max. Marks: 60			Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		What is a Voidable Contract? Give example	(2)
2		What are the rights of a consumer under the Consumer Protection Act 2019?	(2)
3		What is a "Negotiable Instrument" Give example	(2)
4		what is geographical indication", in relation to goods	(2)
5		What is a Red-herring prospectus	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		"A contract without consideration is void." Comment. Are there any exceptions?	(4)
7		Lifting of corporate veil. Explain the grounds on which corporate veil can be lifted?	(4)
8		What are the rights of a patent holder?	(4)
9		Distinguish between condition and warranty.	(4)
10		Limited Liability Partnerships are body corporate. Do you agree? Justify.	(4)
11	1.	What is the purpose of an Electronic Signature Certificate (ESC) under the IT Amendment Act? Who has the authority to issue Electronic Signature Certificate.?	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		What is product liability. Who are covered under the Product Liability regime and their liability in a product liability action?	(8)
13		Distinguish between: 'Annual general meeting' and 'extraordinary general meeting'	(8)
14		What are the key requirements for the incorporation of an LLP?	(8)
15		What is an infringement of trademark? What are the remedies available for trademark owner in a situation of infringement of trade mark?	(8)
16		"All agreements are contracts if they are made by free consent of the parties, competent to contract, for a lawful consideration and with a lawful object and are not hereby expressly	(8)

		declared to be void". Discuss the various elements of a valid contract inherent in this sentence. Explain your points with examples in each case.	
		PART D (Compulsory Question, 10 marks)	
17		Meet Vikram, a mechanical engineer with a passion for enhancing efficiency in industrial manufacturing processes. After years of research and development, Vikram has invented a groundbreaking mechanical device designed to optimize precision and productivity in metal fabrication. This device is a state-of-the-art hydraulic press equipped with advanced sensors, precision controls, and customizable automation features. It offers unparalleled accuracy and repeatability, making it ideal for a wide range of metalworking applications, including stamping, forging, and forming. He enquired in different industries with regard to the requirement of such mechanical device and he understood that there is a huge potential market for this mechanical device. Understanding the importance of protecting his intellectual property, Vikram seeks professional assistance from you to secure patent protection for his innovative mechanical device with the name "Pressmer". A) Can Vikram apply for Patent for his invention. Does his invention come under the criteria for patenting? B) Explain to him the procedure for applying patent and the steps in grant of patent	(10)

SET 1		
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)		
UNIVERSITY OF CALICUT …….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR		
Course Code: BUS 1C 03		
Course Name: Legal Environment of Business		
Max. Marks: 60		Duration: 3 Hours

PART A			
		Answer all questions, each carries 2 marks.	Marks
1		An agreement which is enforceable by law at the option of one or more of the parties thereto, but not at the option of the other or others, is a voidable contract; Any one example.	(2)
2		Right to safety, right to choose, right to be informed, right to consumer education, right to be heard, right to seek redressal	(2)
3		It is a "a written promise or order to pay money which may be transferred from one hand to another as a substitute for money." For example cheque According to Section 13(1) of the Negotiable Instruments Act, "a negotiable instrument means a promissory note, bill of exchange or cheque payable either to order or to bearer."	(2)
4		Geographical indication (GI) in relation to goods indicates that a product comes from a specific area, like a country or region. It suggests that the quality, reputation, or other characteristics of the product are closely tied to its geographical origin. GIs can be applied to agricultural goods, natural goods or manufactured goods .For manufactured goods, at least one stage of production, processing, or preparation must occur in the area identified by the GI.	(2)
5		"red herring prospectus" means a prospectus which does not include complete particulars of the quantum or price of the securities included therein.	(2)
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		The principle that "a contract without consideration is void" is a fundamental concept in contract law. Consideration refers to something of value given by each party to a contract that induces them to enter into the agreement. It is essentially what each party gives or promises in exchange for the other party's promise. Without consideration, a contract lacks the necessary element of mutual obligation, and thus, it may not be enforceable in a court of law. Exception: 1. Natural love and affection ,2. Past voluntary services ,3. promise to pay a time-barred debt ,4. Gift actually made,5) creation of agency. Explanation of points.	(4)
7		Lifting the corporate veil is a legal concept that allows a court to disregard the separate legal personality of a corporation and hold its shareholders or directors personally liable for the corporation's actions or debts. This is typically done when it's deemed necessary to prevent fraud, injustice, or wrongdoing. Major instances when the corporate veil is lifted are	(4)

		As per Statutory provisions *Officer in Default, Reduction of Membership, Improper use of name, Fraudulent conduct,* **Failure to refund application money** **On Judicial grounds** Agency: When the company is merely an agent or alter ego of its shareholders or directors, and is used to conceal their personal dealings or liabilities, Fraud, Improper use of name, Tax evasion.	
8		Subject provisions under section 47, Patentees have exclusive rights: •If it's a product patent: To stop others from making, using, selling, or importing the product in India without permission. •If it's a process patent: To prevent others from using the process and from using, selling, or importing the product made directly by that process in India without permission. This include the right to licence, use the patent, right to sue for infringement	(4)
9		A stipulation in a contract of sale with reference to goods, which are the subject thereof, may be a condition or a warranty [Section 12(1)]. A condition is a stipulation essential to the main purpose of the contract, the breach of which gives rise to a right to treat the contract repudiated [Section 12(2)]. On the other hand, a warranty is defined as a stipulation collateral to the main purpose of the contract, the breach of which gives rise to a claim for damages but not to a right to reject the goods and treat the contract as repudiated [Section 12(3)].	(4)
10		A Limited Liability Partnership (LLP) is a unique form of business structure that combines features of both partnerships and corporations. It provides its owners, called partners, with limited liability protection similar to that of a corporation while allowing them to organize and operate the business as a partnership.	(4)
	1.	**Legal Entity**: An LLP is considered a separate legal entity distinct from its partners. This means that it can enter into contracts, own property, sue and be sued in its own name. As a result, the LLP itself can be held responsible for its debts and obligations.	
	2.	**Limited Liability**: One of the key features of an LLP is limited liability, which means that the personal assets of the partners are protected from the debts and liabilities of the LLP. In other words, if the LLP incurs debts or legal liabilities beyond its assets, the personal assets of the partners are generally not at risk. This protection is similar to that enjoyed by shareholders of a corporation.	
	3.	**Liability of Partners**: While the LLP itself has limited liability, the partners may still be personally liable for their own wrongful acts or misconduct. This means that if a partner engages in fraudulent behavior, breaches a duty owed to the LLP, or acts outside the scope of their authority, they may be held personally liable for any resulting damages.	
	4.	**Perpetual Succession**: Like a corporation, an LLP has perpetual succession, meaning that its existence is not dependent on the status of its partners. Changes in ownership, such as the admission or withdrawal of partners, do not affect the LLP's existence or continuity of business operations.	
11	1.	The Electronic Signature Certificate (ESC) serves the purpose of providing a digital equivalent to handwritten signatures, thereby enabling secure and legally recognized electronic transactions under the IT Amendment Act. It contributes to enhancing the authenticity and integrity of electronic records and documents.	(4)
	2.	Electronic Signature Certificates are issued by licensed Certifying Authorities (CAs) in accordance with the provisions of the IT Amendment Act. These CAs are regulated by the Controller of Certifying Authorities (CCA), ensuring compliance with established standards and guidelines.	
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		Product liability refers to the legal responsibility of manufacturers, distributors, suppliers, and retailers for injuries or damages caused by defective products they produce or sell. When a product is defective or dangerous, and it causes harm to consumers or users, those injured may seek compensation for their injuries through product liability claims.	(8)

13		Section 96 of the Companies Act provides that every company, except a One-Person Company, must hold a meeting of its members each year. Since it is to be held annually, it is known as the Annual General Meeting (AGM). businesses transacted at such meeting are treated as ordinary businesses Convening annual general meeting is a statutory requirement The annual general meeting shall be held every year, not more than 15 months shall elapse between the two annual general meetings and annual general meeting shall be held within a period of six months from the date of closing of the financial year As per section 100, A general meeting of a company which is held between two consecutive AGMs for transacting some special or urgent business is known as an Extraordinary General Meeting.	(8)
14		The key requirements for the incorporation of an LLP: **1. Minimum Partners**: At least two individuals or corporate entities are required to act as partners to form an LLP. **2.Designated Partners**: Every LLP must have at least two designated partners who are individuals, and at least one of them must be a resident in India. Designated partners are responsible for compliance-related matters and act as the primary liaison between the LLP and the regulatory authorities. 3.Requirement of DIN/ DPIN: 4. The LLP must have a registered office address in India. This address will be used for official communication and must be valid for receiving legal notices and documents. **5.Name Reservation**: Before incorporation, the proposed name of the LLP must be reserved with the Registrar of Companies (RoC). The name must comply with the naming guidelines specified by the RoC, including uniqueness, relevance, and adherence to regulatory restrictions. **6.LLP Agreement**:. 7.E-filing of documents: To complete and submit incorporation document in the form prescribed with the Registrar electronically; As per Rule 11(1) of LLP Rules, 2009, the incorporation document shall be filed with the Registrar having jurisdiction over the registered office of the LLP in Form 2 which shall mention following: (a) Name of the LLP; (b) .Proposed business of the LLP; (c) Address of the registered office of the LLP; (d) Name and address of each of the persons who are to be partners of the LLP on its incorporation including details of the partnership, directorship; (e) Name and address of the persons who are to be designated partners of the LLP on its incorporation including details of the partnership, directorship; (f) Total monetary value of contribution by partners in LLP; (g) Details of the subscribers and witness; Statement of the subscribers and professional for compliance of all the requirements for incorporation of LLP; (h) Contain such other information concerning the proposed limited liability as may be prescribed. 8.**Payment of Fees**: The requisite fees for incorporation, name reservation, and filing of documents must be paid to the Registrar of Companies as per the prescribed schedule. 9.**Subscriber's Statement**: Each subscriber to the LLP must sign and submit a subscriber's statement, declaring their consent to become partners of the LLP. 10.**Digital Signature Certificates (DSC)**: Designated partners must obtain digital signature certificates, which are required for electronically signing the incorporation documents and other filings with the Registrar of Companies. 11.**Consent and Authorization**: The designated partners must provide their consent and authorization for their appointment as partners and their acceptance of the responsibilities associated with the position.	(8)
15		Trademark infringement refers to the unauthorized use of a trademark that is identical or confusingly similar to a registered trademark, in connection with goods or services, without the authorization of the trademark owner. This unauthorized use can lead to consumer confusion about the source of the goods or services, dilution of the distinctiveness of the original trademark, or damage to the reputation of the trademark owner. Infringement may occur when a party uses a trademark in a way that is likely to cause confusion, mistake, or deception among consumers, thereby encroaching upon the exclusive rights granted to the trademark owner. When a trademark owner discovers infringement of their trademark, they have several legal remedies available to them. These remedies aim to stop the infringement and compensate the trademark owner for any damages suffered. Here are some common remedies for trademark infringement:	(8)
	1.	**Injunctive Relief**:	
	2.	**Damages**:.	
	3.	**Accounting of Profits**:	

	4.	**Seizure and Destruction of Infringing Goods**:.	
	5.	**Corrective Advertising**:	
	6.	**Criminal Prosecution**	
16	1.	The statement outlines the basic elements of a valid contract, as per contract law principles.	(8)
	2.	**Free Consent**: This means that both parties enter into the contract voluntarily, without any form of coercion, undue influence, fraud, misrepresentation, or mistake. Both parties must agree to the terms of the contract without any external pressure.	
		Example: A sells his car to B, but B threatens A with physical harm if he doesn't agree to sell at a certain price. In this case, A's consent is not free because it is obtained under duress, and the contract may be voidable.	
	3.	**Competence to Contract**: This refers to the legal capacity of the parties to enter into a contract. Generally, individuals must be of sound mind, legal age (usually 18 years old or above), and not under any legal disability to be considered competent to contract.	
	4.	**Lawful Consideration**: Consideration is something of value exchanged between the parties to a contract. It can be money, goods, services, or a promise to do or refrain from doing something. For a contract to be valid, there must be lawful consideration exchanged between the parties.	
		Example: A agrees to pay B $500 in exchange for B's promise to deliver a computer. Here, the consideration is the promise to pay $500 and the promise to deliver the computer.	
	5.	**Lawful Object**: The object of the contract must be lawful. This means that the purpose or subject matter of the contract must not be illegal, against public policy, or impossible to perform.	
		Example: A contracts with B to smuggle illegal goods across the border. Since the object of the contract is illegal, the contract is void and unenforceable.	
	6.	**Not Expressly Declared Void**: Finally, for a contract to be valid, it must not be expressly declared void by law. Certain types of contracts, such as contracts entered into under duress, contracts involving illegal activities, or contracts that violate public policy, may be declared void by statute or common law.	
		Example: Contracts for the sale of illegal drugs are expressly declared void by law. Therefore, a contract for the sale of illegal drugs would not be enforceable.	
		In summary, for a contract to be valid, it must have the elements of free consent, competence to contract, lawful consideration, a lawful object, and not be expressly declared void by law. If any of these elements are missing or compromised, the contract may be void or voidable.	

		PART D (Compulsory Question)	
17		A).Vikram can apply for a patent for his invention, provided it meets the criteria for patenting. Generally, patents are granted for inventions that are novel, non-obvious, and useful. From the description provided, Vikram's invention of the hydraulic press equipped with advanced sensors, precision controls, and customizable automation features appears to meet these criteria. It's innovative in its design and application, offering significant advancements over existing technologies in the field of metal fabrication. However, it's essential for Vikram to conduct a thorough patentability search and analysis to ensure that his invention meets all the necessary criteria for patentability.	(10)
		B) The procedure for applying for a patent and the steps involved in the grant of a patent typically involve the following:	
	1.	**Preparation**: Vikram needs to prepare a detailed patent application describing his invention, including its components, operation, and advantages. The application should also include drawings or diagrams to illustrate the invention's design and functionality.	
	2.	**Filing the Application**: Once the patent application is prepared, Vikram needs to file it with the appropriate patent office. The filing may include paying fees and submitting any necessary forms or documents.	
	3.	**Patent Examination**: After filing, the patent office will conduct an examination of the application to determine whether the invention meets the criteria for patentability. This examination may include a review of prior art (existing patents and publications) to assess the novelty and non-obviousness of the invention. During the examination process, the patent office may issue office actions requesting additional information or amendments to the application. Vikram, with the assistance of will need to respond to these office actions within the specified time frame.	
	4.	**Patent Grant**: If the patent office determines that the invention meets all the necessary	

criteria for patentability, it will issue a patent grant. This grants Vikram exclusive rights to his invention for a specified period, typically 20 years from the filing date of the application.

Maintenance: After the patent is granted, Vikram will need to pay maintenance fees to keep the patent in force. These fees are typically due at regular intervals over the lifespan of the patent.

SET 1		
UNIVERSITY OF CALICUT		
…………………. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR		
Course Code: BUS 1C 04		
Course Name: Organizational Behaviour		
Max. Marks: 60		Duration: 3 Hours

PART A

			Marks
		Answer all questions, each carries 2 marks.	Marks
1		Match the following:	(2)
		A. Conscientiousness 1) Assertive	
		B. Extraversion 2) Curious	
		C. Openness to experience 3) Cooperation	
		D. Agreeableness 4) Calm	
		E. Emotional stability 5) Organized	
2		Illustrate 'figure and ground principle'.	(2)
3		Examine the managerial implications of 'social loafing' at the workplace.	(2)
4		Interpret the characteristics of a group and a team.	(2)
5		Explain Kurt Lewin's model of managing change	(2)

PART B

		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Examine the discipline of 'organizational behaviour' and explain how organizational behaviour helps managing a business.	(4)
7		'Individuals give different meaning to their environment', JUSTIFY?	(4)

8		Imagine! You are the CEO of a company. Explain how to apply Herzberg's two-factor theory to enhance employee motivation.	(4)
9		Evaluate the conflict handling intentions: compete, collaborate, and accommodate.	(4)
10		How to manage stress at work by knowing its potential sources?	(4)
11		Why do people form groups?	(4)

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PART C

Answer any THREE questions from this section. Each question carries 8 marks

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12		Evaluate how individuals are unique	(8)
13		Explain the practical implications of classical conditioning theory at the workplace.	(8)
14		Analyze the stages of group formation and development.	(8)
15		How to create effective teams?	(8)
16		As a manager, how would you overcome employee's resistance to change?	(8)

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PART D (Compulsory Question, 10 marks)

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17		Forty exceptional employees, six short months, and the responsibility to one reputable Fortune 100 company: That is what Darci Kleindl was handed when she accepted a job as the general manager of sales excellence and sales enablement for the Microsoft Business Solutions (MBS) group. She inherited a global team of customer support managers, all of whom work with diverse clientele, including engineers, marketing organisations, consultants, and external customers. She also manages a team of leaders who drive worldwide standards for sales basics, internal and external readiness, and the business rhythm and communications to accelerate the MBS group. As daunting as her situation seemed, Kleindl wasn't new to managing dynamic groups or governing complex situations. Her career often has included strategizing on the higher executive level. This time, however, would be different. She planned to implement a comprehensive team/group development programme focusing on its properties that would transform her work culture and provide a foundational structure for her team. Now, the key question is how to enhance the effectiveness of MBS team/group by managing its properties?	(10)

	SET 1
	Scheme of Valuation/Answer Key
	(Scheme of evaluation (marks in brackets) and answers of problems/key)
	UNIVERSITY OF CALICUT
	…….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
	Course Code: BUS 1C 04
	Course Name: Organizational Behaviour

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		0.5 marks for every correct combination	(2)
2		Definitions with examples	(2)
3		Conceptual clarity and how it affects workplace outcomes	(2)
4		Differentiating features to be mentioned	(2)
5		The implied processes are to be explained	(2)

PART B

		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Mention the concept - organizational behaviour and its characteristics and significance	(4)
7		Mention the concept of perception, its processes and determinants.	(4)
8		Provide the practical ways of implementing the motivational theory in the context of business.	(4)
9		Compare and contrast the concepts mentioning the merits and demerits	(4)
10		Mention the coping mechanism considering the potential sources of stress.	(4)
11		Mention the theoretical reasons of forming groups	(4)

PART C

		Answer any THREE questions from this section. Each question carries 8 marks	
12		Provide the basis for individual differences – personality, beliefs, values, attitude, biological factors.	(8)
13		Mention the process and its application at workplace	(8)
14		Mention the stages of formation and the significance of each stage	(8)

15		Mention the combination of effective team, the how part	(8)
16		Mention the managing tactics and strategies to overcome the resistance	(8)
		PART D (Compulsory Question)	
17		Briefly describe scenario, identify the specific problem, solutions based on the properties of team and explain to what extend each of the properties would contribute to the team effectiveness, its mix and matches including the alternatives.	(10)

SET 1

UNIVERSITY OF CALICUT …………………. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 1C 05

Course Name: ENVIRONMENT AND   SUSTAINABILITY

Max. Marks: 60		Duration: 3 Hours

PART A		
	Answer all questions, each carries 2 marks.	Marks
1	Define the lithosphere and provide an example.	(2)
2	Discuss the impact of fossil fuel consumption on the environment.	(2)
3	Highlight the types of environmental impacts resulting from industrial pollution.	(2)
4	Define sustainable development and list its key elements.	(2)
5	Describe the purpose of an Environment Impact Assessment (EIA).	(2)
PART B		
	Answer any FOUR questions from this section. Each question carries 4 marks.	
6	Discuss the components of the biosphere and their interdependence.	(4)
7	Evaluate the environmental and economic consequences of depleting natural resources.	(4)
8	Assess the impacts of industrial pollution on social aspects.	(4)
9	Explain the principles of sustainable development and provide examples.	(4)
10	Analyse the role of international initiatives in addressing global environmental issues.	(4)
11	Evaluate the impact of green taxes on businesses promoting environmental responsibility.	(4)
PART C		
	Answer any THREE questions from this section. Each question carries 8 marks	
12	Elaborate on the concept of ecology and its significance in the environment.	(8)
13	Discuss the challenges in managing renewable energy sources for sustainable development.	(8)
14	Propose effective strategies for managing industrial pollution and its long-term effects.	(8)
15	Explore the guidelines for achieving sustainable development in the business sector.	(8)
16	Assess the impact of environmental legislations on businesses and industries.	(8)
PART D (Compulsory Question, 10 marks)		
17	GreenWays Apparel, a boutique fashion brand, embarked on a mission to revolutionize the fashion industry by prioritizing sustainability. Faced with the environmental impact of traditional textile manufacturing, GreenWays transformed its supply chain by sourcing organic and recycled materials. Implementing eco-friendly dyeing processes and minimizing water usage, the company aimed to reduce its carbon footprint. GreenWays also focused on fair labour practices, ensuring ethical treatment of workers throughout the supply chain. As a result, the brand not only	(10)

appealed to environmentally conscious consumers but also contributed to the larger movement towards sustainable and ethical fashion.

1.Discuss the key steps taken by GreenWays Apparel in transforming its supply chain to prioritize sustainability. How did these changes contribute to the brand's overall mission?

2. Analyse the impact of GreenWays Apparel's sustainability initiatives on consumer perception and purchasing behaviour within the fashion industry. How can other fashion brands learn from GreenWays' approach to meet evolving consumer expectations?

SET 1
Scheme of Valuation/Answer Key
(Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT   …………………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 1C 05
Course Name: ENVIRONMENT AND   SUSTAINABILITY

Max. Marks: 60		Duration: 3 Hours

PART A		
Answer all questions, each carries 2 marks.		Marks
1	**Define the lithosphere and provide an example. (2)** Definition: 1 mark Example: 1 mark	(2)
2	**Discuss the impact of fossil fuel consumption on the environment. (2)** Points on air pollution, greenhouse gas emissions, climate change, and resource depletion: 2 marks	(2)
3	**Highlight the types of environmental impacts resulting from industrial pollution. (2)** Identification and discussion of types (air, water, soil pollution, etc.): 2 marks	(2)
4	**Define sustainable development and list its key elements. (2)** Definition: 1 mark List of key elements (economic viability, social equity, environmental responsibility): 1 mark	(2)
5	**Describe the purpose of an Environment Impact Assessment (EIA). (2)** Clear description of the purpose: 2 marks	(2)
PART B		
Answer any FOUR questions from this section. Each question carries 4 marks.		
6	**Discuss the components of the biosphere and their interdependence. (4)** Components (atmosphere, lithosphere, hydrosphere, living organisms): 2 marks Interdependence (exchange of energy and materials): 2 marks	(4)
7	**Evaluate the environmental and economic consequences of depleting natural resources. (4)** Environmental consequences (habitat destruction, loss of biodiversity): 2 marks Economic consequences (increased prices, economic instability): 2 marks	(4)
8	**Assess the impacts of industrial pollution on social aspects. (4)** Identification of impacts (health issues, community displacement, social inequality): 2 marks Analysis of social aspects: 2 marks	(4)
9	**Explain the principles of sustainable development and provide examples. (4)** Clear explanation of principles (economic, social, environmental considerations): 2 marks Relevant examples (promoting renewable energy, adopting green technologies): 2 marks	(4)
10	**Analyse the role of international initiatives in addressing global environmental issues. (4)** Identification of initiatives (examples of agreements and organizations): 2 marks Analysis of their impact: 2 marks	(4)
11	**Evaluate the impact of green taxes on businesses promoting environmental responsibility. (4)** Assessment of impact: 4 marks	(4)
PART C		
Answer any THREE questions from this section. Each question carries 8 marks		

12		**Elaborate on the concept of ecology and its significance in the environment. (8)** Comprehensive elaboration: 6 marks Clear significance explanation: 2 marks	(8)
13		**Discuss the challenges in managing renewable energy sources for sustainable development. (8)** Identification of challenges (intermittency, storage issues, infrastructure): 4 marks In-depth discussion: 4 marks	(8)
14		**Propose effective strategies for managing industrial pollution and its long-term effects. (8)** Clear proposals (stricter regulations, cleaner technologies, waste management): 6 marks Consideration of long-term effects: 2 marks	(8)
15		**Explore the guidelines for achieving sustainable development in the business sector. (8)** In-depth exploration: 6 marks Clear guidelines: 2 marks	(8)
16		**Assess the impact of environmental legislations on businesses and industries. (8)** Evaluation of impact: 6 marks Clear analysis: 2 marks	(8)
		PART D (Compulsory Question)	
17		**GreenWays Apparel Case Study** **Introduction (2 Marks)** **1.Discuss the key steps taken by GreenWays Apparel in transforming its supply chain to prioritize sustainability. How did these changes contribute to the brand's overall mission?** Clear discussion of key steps (sourcing organic and recycled materials, eco-friendly dyeing, minimizing water usage): **2 marks** Explanation of contribution to the mission (reducing carbon footprint, aligning with the mission): **2 marks** **2.Analyze the impact of GreenWays Apparel's sustainability initiatives on consumer perception and purchasing behaviour within the fashion industry. How can other fashion brands learn from GreenWays' approach to meet evolving consumer expectations?** Analysis of impact on consumer perception and purchasing behaviour: **2 marks** Suggestions for other brands (transparency, ethical sourcing): **2 marks**	(10)

SET 1
UNIVERSITY OF CALICUT
…………………. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 1C 06

Course Name: **MANAGERIAL ECONOMICS**	
Max. Marks: 60	Duration: 3 Hours

	PART A	
	Answer all questions, each carries 2 marks.	Marks
1	Define Managerial Economics and explain its scope.	(2)
2	Explain the Law of Demand and its significance in business.	(2)
3	What is the Cobb-Douglas Production function? Provide its relevance in managerial decisions.	(2)
4	Define perfect competition and outline its characteristics.	(2)
5	Explain the role of Fiscal Policies in economic stabilization.	(2)

	PART B	
	Answer any FOUR questions from this section. Each question carries 4 marks.	
6	Discuss the concepts of Marginalism and Equi-Marginal Concept in Managerial Economics.	(4)
7	How does Price Elasticity of Demand affect pricing decisions?	(4)
8	Explain the Law of Variable Proportion and its implications in production.	(4)
9	Differentiate between Monopoly and Monopolistic Competition.	(4)
10	Discuss the relevance of Demand Forecasting techniques in business planning.	(4)
11	Define the concept of Opportunity Cost and its application in decision-making.	(4)

	PART C	
	Answer any THREE questions from this section. Each question carries 8 marks	
12	Evaluate the significance of Cost-Benefit Analysis in managerial decision-making.	(8)
13	Compare and contrast the economic development models proposed by Mahalanobis and Kaldor.	(8)
14	Analyze the different market structures and their impact on price-output determination.	(8)
15	Explain the concepts of Isoquants and Isocost Lines with examples.	(8)
16	How do Fiscal and Monetary Policies influence macroeconomic stability?	(8)

	PART D (Compulsory Question, 10 marks)	
17	A company sells a product at a selling price of Rs 50/- per unit. The cost of production for each unit is Rs 40/-. Additionally, the fixed costs incurred by the company amount to Rs 5,000/-. Using this information: (i) Calculate the Profit Volume (PV) ratio. (ii) Determine the Break Even Point (BEP) in terms of both units and total revenue. (iii) How many units must the company sell to achieve a profit of Rs. 50,000/-?	(10)

SET 1

SCHEME OF VALUATION / ANSWER KEY
(Scheme of evaluation (marks in brackets) and answers of problems/key)

UNIVERSITY OF CALICUT
…………………. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 1C 06
Course Name: MANAGERIAL ECONOMICS

Max. Marks: 60			Duration: 3 Hours

PART A

	Answer all questions, each carries 2 marks.	Marks
1	- 1 mark for defining managerial economics. - 1 mark for explaining its scope.	(2)
2	- 1 mark for explaining the Law of Demand. - 1 mark for discussing its significance in business.	(2)
3	- 1 mark for defining the Cobb-Douglas Production function. - 1 mark for explaining its relevance in managerial decisions.	(2)
4	- 1 mark for defining perfect competition. - 1 mark for outlining its characteristics.	(2)
5	- 1 mark for explaining the role of Fiscal Policies. - 1 mark for discussing its impact on economic stabilization.	(2)

PART B

	Answer any FOUR questions from this section. Each question carries 4 marks.	
6	- Marginalism: 2 marks - Equi-Marginal Concept: 2 marks	(4)
7	- Explanation of Price Elasticity of Demand: 2 marks - Impact on Pricing Decisions: 2 marks	(4)
8	- Explanation of the Law of Variable Proportion: 2 marks - Implications in Production: 2 marks	(4)
9	- Explanation of Monopoly: 2 marks - Explanation of Monopolistic Competition: 2 marks	(4)
10	- Explanation of Demand Forecasting Techniques: 2 marks - Importance in Business Planning: 2 marks	(4)
11	- Definition of Opportunity Cost: 2 marks - Application in Decision-Making: 2 marks	(4)

PART C

	Answer any THREE questions from this section. Each question carries 8 marks	
12	- Explanation of Cost-Benefit Analysis: 4 marks - Significance in Managerial Decision-Making: 4 marks	(8)
13	- Explanation of Mahalanobis Model: 4 marks - Explanation of Kaldor's Model: 4 marks	(8)

14		- Explanation of Different Market Structures: 4 marks - Impact on Price-Output Determination: 4 marks	(8)
15		- Explanation of Isoquants: 3 marks - Explanation of Isocost Lines: 3 marks - Examples: 2 marks	(8)
16		- Explanation of Fiscal Policy: 4 marks - Explanation of Monetary Policy: 4 marks	(8)

PART D (Compulsory Question)

| 17 | | **(i) Calculate the Profit Volume (PV) ratio. [2 marks]**
- Allocate 1 mark for correct formulas
- Allocate 1 mark for correct application of formulas and calculations.

(ii) Determine BEP in terms of both units and total revenue. [4 marks]
- Allocate 1 mark for correct formulas
- Allocate 2 mark for correct application of formulas and calculations.
- Allocate 1 mark for clarity and correctness of the solution.

(iii) Units the company sell to achieve a profit of Rs. 50,000/-? [4 marks]
- Allocate 1 mark for correct formulas
- Allocate 1 mark for correct application of formulas and calculations.
- Allocate 1 mark for clarity and correctness of the solution. | (10) |

SET 1

UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 1C 07
Course Name: QUANTITATIVE TECHNIQUES

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Define Addition theorem and Multiplication theorem of probability	(2)
2		Explain the difference between point estimate and interval estimate using normal distribution.	(2)
3		State the difference between null hypothesis and alternative hypothesis	(2)
4		What is non- parametric test?	(2)
5		What do you mean by regression?	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		In a bolt factory, machines A, B and C manufacture respectively 25%, 35% and 40% of the total production. Of their output 5, 4 and 2 per cent are defective bolts. A bolt is drawn at random from the production and is found to be defective. What is the probability that it was manufactured by machines A, B and C?	(4)
7		A company's trainees are randomly assigned to groups which are taught a certain industrial inspection procedure by three different methods. At the end of the instructing period, they are tested for inspection performance quality. The following are their scores. Method A: 80, 83, 79, 85, 90, 68 Method B: 82, 84, 60, 72, 86, 87, 91 Method C: 93, 65, 77, 78, 88 Use the H-test to determine at the 0-05 level of significance whether the three methods are equally effective	(4)
8		One fifth per cent of the blades produced by a blade manufacturing factory turn out to be defective. The blades are supplied in packets of 10. Use Poisson distribution to calculate the approximate number of packets containing: ● no defective ● 1 defective ● 2 defective blades respectively in a consignment of 1,00,000 packets.	(4)
9		Calculate the coefficient of correlation from the following data: | X	9	8	7	6	5	4	3	2	1
---	---	---	---	---	---	---	---	---	---
Y	15	16	14	13	11	12	10	8	9		(4)
10		Explain simple, partial and multiple correlation	(4)
11		A simple sample of the height of 6,400 Englishmen has a mean of 67.85 inches and a standard deviation of 2.56 inches while a simple sample of	(4)

heights of 1600 Austrians has a mean of 68.55 inches and standard deviation of 2.52 inches. Do the data indicate that the Austrians are on the average taller than the Englishmen? Give reasons for your answer.

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12	A gynaecologist records the BP of patients and collected the following data	(8)

Age	23	24	25	26	28	29	31	35	40
Lower limit of BP	65	60	62	70	70	73	75	83	90

Calculate the regression equations and also estimate the BP if the age of patient is 38 years.

13	From the adult male population of four larger cities, random samples of sizes given below were taken and the number of married and single men recorded. Do the data indicate any significant variations among cities in the tendency of men to marry?	(8)

City	A	B	C	D	Total
Married	137	164	152	147	600
Single	32	57	56	35	180
Total	169	221	208	182	780

14	Explain the concept of sampling and describe four different types of sampling techniques commonly used in research. Provide real-world examples to support your discussion.	(8)
15	Explain various approaches of probability.	(8)
16	In an intelligence test administered to 1,000 students the average score was 42 and standard deviation 24. Find:	(8)

    (a) the number of students exceeding a score of 50
    (b) the number of students lying between 30 and 54
    (c) the value of score exceeded by the top 100 students

PART D (Compulsory Question, 10 marks)

17	**Solve using Two-way ANOVA method**	(10)

Observation	A	B	C	D	E	F
1	1200	1000	980	900	750	800
2	1000	1100	700	800	500	700
3	890	650	1100	900	400	350

SET 1
SCHEME OF VALUATION / ANSWER KEY (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 1C 07
Course Name: QUANTITATIVE TECHNIQUES

Max. Marks: 60			Duration: 3 Hours

PART A		
Answer all questions, each carries 2 marks.		Marks

1	Define addition theorem and multiplication theorem of probability.
	    - Explanation of addition theorem: 1 mark
	    - Explanation of multiplication theorem: 1 mark
		(2)

2	Explain the difference between point estimate and interval estimate using normal distribution.
	    - Explanation of point estimate: 1 mark
	    - Explanation of interval estimate: 1 mark
		(2)

3	State the difference between null hypothesis and alternative hypothesis
	    - Explanation of null hypothesis: 1 mark
	    - Explanation of alternative hypothesis: 1 mark
		(2)

4	What is time series analysis
	    - Definition or explanation: 1 mark
	    - Brief explanation of its significance or application: 1 mark
		(2)

5	What do you mean by regression
	    - Definition or explanation: 1 mark
	    - Brief explanation of its application: 1 mark
		(2)

PART B		
Answer any FOUR questions from this section. Each question carries 4 marks.		
6	In a bolt factory, machines A, B, and C manufacture respectively 25%, 35%, and 40% of the total production. Of their output 5, 4, and 2 per cent are defective bolts. A bolt is drawn at random from the production and is found to be defective. What is the probability that it was manufactured by machines A, B, and C? (4) Correct application of Bayes Theorem: 2 marks - Accurate calculations (if applicable): 1 mark - Proper explanation or interpretation: 1 mark Ans. Here P(A)=25/100, P(B)=35/100, P(C)=40/100 P(D/A)=5/100, P(D/B)=4/100, P(D/C)=2/100 where D denotes defective bolts Now P(D)=P(A).P(D/A)+P(B).P(D/B)+P(C).P(D/C) =25/100. 5/100+35/100.4/100+40/100.2/100=0.0345 P(A/D)=P(A).P(D/A) / (P(D)	(4)

=25/100. 5/100/0.0345=25/69

P(B/D)=P(B).P(D/B)/P(D)

=35/100.4/100/0.0345=28/69
P(C/D)=P(C).P(D/C)/P(D)

=40/100.2/100/0.0345=16/69

7		Arranging the data jointly according to size and assigning ranks, we get;				(4)

Values	Ranks	Ranks of Sample A	Ranks of Sample B	Ranks of Sample C
60	1	9	10	18
65	2	11	12	2
67	3	8	1	6
68	4	13	5	7
72	5	16	14	15
77	6	4	3	
78	7		17	
79	8			
80	9			
82	10			
83	11			
84	12			
85	13			
86	14			
88	15			
90	16			
91	17			
93	18			
		Total-61	Total-62	Total-48

R1=61, R2=62, R3=48

$$\left(\frac{12}{N(N+1)} \sum_{j=1}^{k} \frac{R_j^2}{n_j} \right) - 3(N+1)$$

H= 0.197
V=3-1=2
Table value= 5.991
Since the calculated value is less than the table value, the null hypothesis is separated and we conclude that 3 methods are equally effective.

| 8 | | One fifth per cent of the blades produced by a blade manufacturing factory turn out to be defective. The blades are supplied in packets of 10. Use Poisson distribution to calculate the approximate number of packets containing:
 - Correct application of Poisson distribution: 2 marks
 - Accurate calculations: 2 marks
 - Proper interpretation of results: 1 mark

 Ans. Probability of getting defective blades= 1/500=0.002, n=10
      m= n*p=10*0.002=0.02
      Number of packets containing no defective blade
        N(Po)= 100000*e^-0.02= 98020
      Number of packets containing one defective blades
        N(P1)= N(Po)*m = 98020*0.02=1960

      Number of packets containing two defective blades
        N(P2)= N(P1)*m/2 = 1960*0.02/2=19.604 | (4) |

| 9 | | Calculate the coefficient of correlation from the given data (4)
 - Correct application of correlation (Karl Pearson method): 2 marks
 - Accurate calculations: 2 marks
 - Proper interpretation of correlation coefficient: 1 mark
 Ans. | (4) |

X	X^2	Y	Y^2	XY
9	81	15	225	135
8	64	16	256	128
7	49	14	196	98
6	36	13	169	78
5	25	11	121	55
4	16	12	144	48
3	9	10	100	30
2	4	8	64	16
1	1	9	81	9
Total=45	Total= 285	Total= 108	Total= 1356	Total= 597

The Karl Pearson Coefficient of Correlation formula is expressed as

$$ r = \frac{n\left(\sum xy\right) - \left(\sum x\right)\left(\sum y\right)}{\sqrt{\left[n\sum x^2 - \left(\sum x\right)^2\right]\left[n\sum y^2 - \left(\sum y\right)^2\right]}} $$

By substituting, we get
r= 0.95

| 10 | | . Explain simple, partial, and multiple correlation (4)
 - Explanation of simple correlation: 1 mark
 - Explanation of partial correlation: 1 mark
 - Explanation of multiple correlation: 1 mark
 - Examples or applications: 1 mark | (4) |

| 11 | | Analyze the data and provide a conclusion (4)
 - Proper comparison of means and standard deviations and application of Z test: 3 marks
 - Explanation of conclusion with reasons: 1 marks
 Ans. | (4) |

$$z = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\dfrac{\sigma_1^2}{n_1} + \dfrac{\sigma_2^2}{n_2}}}$$

Z= (67.85-68.55)/0.0707=9.9

Since the difference is more than S.E, the hypothesis is rejected. Hence the data indicates that the Austrians are on the average taller than the Englishmen.

PART C

Answer any THREE questions from this section. Each question carries 8 marks

| 12 | . Calculate the regression equations and estimate the BP (8) | | | | | | | (8) |

- Correct calculation of regression equations: 4 marks
- Accurate estimation of Blood Pressure : 2 marks
- Clear presentation of results: 1 mark
- Proper interpretation: 1 mark

Ans. Let age denotes X and lower limit of BP by Y

X	(X-Mean)= x	x^2	Y	(Y-mean)= y	y^2	XY
23	-6	36	65	-7	49	42
24	-5	25	60	-12	144	60
25	-4	16	62	-10	100	40
26	-3	9	70	-2	4	6
28	-1	1	70	-2	4	2
29	0	0	73	1	1	0
31	2	4	75	3	9	6
35	6	36	83	11	121	66
40	11	121	90	18	324	198
Total=261	Total=0	Total=248	Total=648	Total=0	Total=756	Total=420

- Regression Equation of Y on X
  - $Y = a + bX$
  - $Y - \bar{Y} = byx\ (X - \bar{X})$
  - $Y - \bar{Y} = r.\ \dfrac{\sigma_y}{\sigma_x}\ (X - \bar{X})$
- Regression Equation of X on Y
  - $X = a + bY$
  - $X - \bar{X} = bxy\ (Y - \bar{Y})$
  - $X - \bar{X} = r.\ \dfrac{\sigma_x}{\sigma_y}(Y - \bar{Y})$

By substituting we get

X= 0.556Y-11.032

Y=1.694X+22.874

Estimation of BP when age is 38= 87

1 3	Analyze the data and draw conclusions (8)
	    - Application of appropriate statistical test (Chi- Square Test) : 5 marks
	    - Proper interpretation of results: 3 marks
	 Ans. Let us take the hypothesis that there is no variation among the cities in the tendency of men to marry
	 Applying chi-square test

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

χ^2 = chi squared

O_i = observed value

E_i = expected value

O	E	(O-E)^2	(O-E)^2/E
137	130	49	0.377
32	39	49	1.256
164	170	36	0.212
57	51	36	0.706
152	160	64	0.400
56	48	64	1.333
147	140	49	0.350
35	42	49	1.167
			Total= 5.801

Table value, v=3, value= 7.82

Calculated value is less than table value. Hypothesis is true, therefore it do not indicate significant variation among cities in the tendency to marry.

(8)

1 4	Fit a straight line trend and find the production of the year 2024 (8)
	    - Correct application of least squares method: 3 marks
	    - Accurate calculation of trend line: 2 marks
	    - Estimation of production for 2024: 2 marks
	    - Proper explanation or interpretation: 1 mark
	
	Ans.						

Year	Y (Production)	X (Deviation from 2017)	XY	X^2	Yc	
2015	12	-2	-24	4	10.8	
2016	20	-1	-20	1	19.6	
2017	28	0	0	0	28.4	
2018	32	1	32	1	37.2	
2019	50	2	100	4	46.0	
N=5	Total=142	Total=0	Total=88	Total=10	Total=142	

$Y_c = a + bX$

Total of X=O;

a=total of Y/N=142/5=28.4

b= total of X*Y/ total of X^2=88/10=8.8

Y= 28.4+8.8X

FOR 2024, X will be 7, Y= 90

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1 5 . Explain various approaches of probability (8)
    - Explanation of different approaches: 3 marks
    - Examples or applications: 3 marks
    - Comparison or significance: 2 marks

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1 6 Solve the given problems (8) (8)
    - Application of normal distribution: 3 marks
    - Clear presentation of results: 2 marks
    - Proper interpretation: 3 marks

Ans. Finding the number of students who scored 50 and above: To find the number of students who scored 50 and above, we need to calculate the z-score for 50 using the formula $z = (x - \mu) / \sigma$, where x is the score we want to find the z-score for, μ is the mean, and σ is the standard deviation.
 z = (50 - 42) / 24
z = 0.33
Using a z-table, we find that the probability of a z-score of 0.33 or higher is 0.3707. This means that approximately 37.07% of the students scored 50 or higher.
Therefore, the number of students who scored 50 and above is:
0.3707 x 1000 = 370.7
 Rounding this off to the nearest whole number, we get:
371 students scored 50 and above.
Finding the number of students lying between 30 and 54: To find the number of students lying between 30 and 54, we need to calculate the z-scores for both 30 and 54 using the formula $z = (x - \mu) / \sigma$.
For 30: z = (30 - 42) / 24 z = -0.5
For 54: z = (54 - 42) / 24 z = 0.5
Using a z-table, we find that the probability of a z-score of -0.5 or lower is 0.3085, and the probability of a z-score of 0.5 or lower is 0.6915.
Therefore, the probability of a student scoring between 30 and 54 is:
0.6915 - 0.3085 = 0.383
Multiplying this probability by the total number of students, we get: 0.383 x 1000 = 383
Therefore, 383 students scored between 30 and 54.

Finding the value of score exceeded by the top 100 students: To find the value of score exceeded by the top 100 students, we need to find the z-score that corresponds to the top 100 students.

We can do this by using the formula z = (x - μ) / σ, where x is the score we want to find the z-score for, μ is the mean, and σ is the standard deviation. Using a z-table, we find that the z-score that corresponds to the top 100 students is approximately 1.28.

Therefore, the score exceeded by the top 100 students is: x = μ + zσ x = 42 + 1.28(24) x = 72.72 Therefore, the score exceeded by the top 100 students is 72.72

PART D (Compulsory Question)

| 1 7 | Analyze the data and provide conclusions (10)
 - Application of Two way Anova test: 4 marks
 - Proper interpretation of results: 4 marks
 - Clear conclusion supported by evidence: 2 marks

 Ans

 Row and column sums

 Solution:
 Given problem | (10) |

Observation	A	B	C	D	E	F
1	1200	1000	980	900	750	800
2	1000	1100	700	800	500	700
3	890	650	1100	900	400	350

	A	B	C	D	E	F	Row total (x_r)
1	1200	1000	980	900	750	800	**5630**
2	1000	1100	700	800	500	700	**4800**
3	890	650	1100	900	400	350	**4290**
Col total (x_c)	3090	2750	2780	2600	1650	1850	14720

$\sum x^2 = 13010000 \rightarrow (A)$

$\sum x^2 c/r = 1/3(3090^2 + 2750^2 + 2780^2 + 2600^2 + 1650^2 + 1850^2)$

$= 13(9548100 + 7562500 + 7728400 + 6760000 + 2722500 + 3422500)$

$= 13(37744000)$

$= 12581333.3333 \rightarrow (B)$

∑x^2r/c=1/6(5630²+4800²+4290²)

=16(31696900+23040000+18404100)

=16(73141000)

=12190166.6667→(*C*)

(∑x)^2/*n*=(14720)^2/18

=216678400/18

=12037688.8889→(*D*)

Sum of squares total
$SST=\sum x2-(\sum x)^2/n=(A)-(D)$

=13010000-12037688.8889

=972311.1111

Sum of squares between rows
$SSR=\sum x^2r/c-(\sum x)2/n=(C)-(D)$

=12190166.6667-12037688.8889

=152477.7778

Sum of squares between columns
$SSC=\sum x^2c/r-(\sum x)2/n=(B)-(D)$

=12581333.3333-12037688.8889

=543644.4444

Sum of squares Error (residual)
$SSE=SST-SSR-SSC$

=972311.1111-152477.7778-543644.4444

=276188.8889

ANOVA table

Source of Variation	Sums of Squares SS	Degrees of freedom DF	Mean Squares MS	F
Between rows	$SSR=152477.7778$	r-1=2	$MSR=\dfrac{152477.7778}{2}=76238.8889$	$\dfrac{76238.8889}{27618.8889}=2.7604$
Between columns	$SSC=543644.4444$	c-1=5	$MSC=\dfrac{543644.4444}{5}=108728.8889$	$\dfrac{108728.8889}{27618.8889}=3.9368$

Error (residual)	$SSE=276188.8889$	$(r$-1$)$ $(c$-1$)=10$	$MSE=276188.8889 / 10 = 27618.8889$	
Total	$SST=972311.1111$	rc-1=17		

SET 1
UNIVERSITY OF CALICUT …….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 1C 08
Course Name: ACCOUNTING FOR MANAGERS

Max. Marks: 60			Duration: 3 Hours

	PART A	
	Answer all questions, each carries 2 marks.	Marks
1	Bring out the relationship between the journal and the ledger	(2)
2	Distinguish between capital expenditure and revenue expenditure with examples	(2)
3	Explain the term 'Capital Gearing Ratio' and also its significance	(2)
4	What do you mean by cash flow from investing activities?	(2)
5	Describe the term 'fund'	(2)

	PART B	
	Answer any FOUR questions from this section. Each question carries 4 marks.	
6	Evaluate various accounting concepts with appropriate examples.	(4)
7	Assess the strategic implications of the current ratio, quick ratio, and cash ratio in assessing a company's short-term financial health	(4)
8	Compare and contrast fund flow and cashflow analysis	(4)
9	From the following calculate cash from operations 	Particulars	2008	2009
Bills receivable	50000	47000
Debtors	10000	12500
Bills payable	20000	25000
Creditors	8000	6000
Outstanding expenses	1000	1200
Prepaid expenses	800	700
Accrued Income	600	750
Income received in advance	800	250
Profit made during the year	----	70000		(4)
10	From the following, find out (a) Sales; (b) Closing stock (c) Debtors (d) Creditors GP ratio – 15% Stock velocity – 6 months	(4)

		Debtors velocity – 3 months Creditors velocity – 3 months Gross profit = 60000 Closing stock = Opening Stock	
11		Prepare a Trial Balance from the following items:	(4)

	₹		₹
Capital	24,000	Building	12,000
Opening Stock	8,500	Returns Inward	1,900
Furniture	2,600	Returns Outward	350
Purchases	8,950	Trade Expenses	1,000
Cash	7,300	Discount Received	970
Carriage	300	Salary	3,000
Sales	22,500	Office Rent	2,270

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Describe the key stakeholders who derive value from financial statements and analyze the significance of financial reporting in meeting the informational needs of investors, creditors, management, and other relevant parties for effective decision-making and strategic planning within organizations.	(8)
13		From the following information prepare a summarised Balance Sheet as on 31-03-2020. (a) working capital Rs.2,40,000 (b) Reserves and Surplus Rs.1,60,000 (c) Bank overdraft Rs. 40,000 (d) Proprietary Ratio (Fixed Assets: Shareholders Fund) 0.75 (e) Current Ratio 2.5 (f) Liquid Ratio 1.5	(8)
14		Prepare a Statement of Changes in Working Capital from the following Balance Sheets of Blue Ocean and Company Limited.	(8)

Balance Sheets as at December 31

Liabilities	2010 ₹	2011 ₹	Assets	2010 ₹	2011 ₹
Equity capital	5,00,000	5,00,000	Fixed Assets	6,00,000	7,00,000
Debentures	3,70,000	4,50,000	Long term		
Tax Payable	77,000	43,000	investments	2,00,000	1,00,000
Accounts			Work-in-		
Payable	96,000	1,92,000	Progress	80,000	90,000
Interest	37,000	45,000	Stock	1,50,000	2,25,000
Payable			Accounts		
Dividend	50,000	35,000	receivable	70,000	1,40,000
Payable			Cash	30,000	10,000
	11,30,000	12,65,000		11,30,000	12,65,000

1		What is Fund from Operation? How would you compute funds from operation?	(8)

5					
1 6		The balance sheet of VXL Ltd. Is given below:			(8)

Balance Sheet

Liabilities	2009	2008	Assets	20
Creditors	40000	30000	Cash	600
Debentures	90000	150000	Trade debtors	1000
Provision for depreciation on plant	80000	60000	Inventory	1200
Equity share capital	240000	200000	Land	800
Retained earnings	160000	125000	P&M	2500
	610000	565000		6100

Cash dividend of Rs.25000 have been paid during the year

Prepare cash flow statement

PART D (Compulsory Question, 10 marks)

1 7		From the following figures taken from the books of T Anand, prepare Trading, Profit and Loss Account for the year ended 31 st December 2018 and a Balance Sheet as on that date after making adjustments.	(10)

Debit balances	Rs.	Credit balances	Rs.
Purchases	1,20,500	Capital	52,000
Stock on 1-1-2018	21,500	Sales	1,86,000
Salaries	14,000	Sundry creditors	10,900
Rent & taxes	3,000		
Insurance	800		
General expenses	3,100		
Wages	25,000		
Machinery	31,000		
Sundry debtors	20,000		
Cash at bank	3,000		
Drawings	7,000		

Adjustments:
1. Salaries for the month of December still unpaid 1,600
2. Insurance prepaid to the extent of Rs.250
3. Depreciate Machinery by 10%
4. Closing stock was valued at Rs. 26,000

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT …….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 1C 08
Course Name: Accounting for Managers

Max. Marks: 60		Duration: 3 Hours

		PART A
		Answer all questions, each carries 2 marks.
1		Mention any two points – 2 marks
2		Mention anyone difference – 1 mark; Mention any one example of capital and revenue expenditure – 1 mark
3		Explanation of capital gearing ratio – 1 mark; Significance mentioned – 1 mark
4		Explanation – 2 marks
5		Description of the term fund – 2 marks
		PART B
		Answer any FOUR questions from this section. Each question carries 4 marks.
6		Any four accounting concepts with examples – 4 marks (1 mark each)
7		Explanation of each ratio (1 mark each) Significance explained – 1 mark
8		Any three – four differences mentioned – 4 marks
9		Cash from Operations 73,100 - 4 marks
1 0		(a) Sales = 400000 (1mark) (b) Closing stock = 170000 (1mark) (c) Debtors = 100000 (1 mark) (d) Creditors = 85000 (1 mark)
1 1		Trial Balance total – 47,820 (4 marks)
		PART C
		Answer any THREE questions from this section. Each question carries 8 marks
1 2		Explanation with 4 stakeholders mentioned – 8 marks

13 Current Ratio = 2.5 , If current assets =2.5 , then current liabilities = 1

Working capital = 240,000 , current assets – current liabilities = 240,000, 2.5 – 1 = 240,000

Then working capital = 1.5 = 240,000.

Therefore current asset = 240,000 *2.5/1.5

Current assets = 4,00,000 ,Then current liabilities =240,000*1/1.5 = 160,000

Liquid Ratio = 1.5 , Liquid asset = 1.5 , current liability = 1 = 160,000

Liquid asset = 160,000*1.5/1 = 240,000. Liquid asset = current asset – stock ,

240,000 = 4,00,000 – stock , Therefore stock = 4,00,000 – 240,000 = 160,000

Proprietary Ratio ie. Fixed asset / shareholders fund = 0.75 , Fixed asset = 0.75,

Shareholders fund = 1 , Shareholders fund can be calculated from the following relationship.

ie. Fixed asset + Current asset = shareholders fund + current liabilities

Current asset – current liabilities = shareholders fund – Fixed assets

4,00,000 – 160,000 = 1 – 0.75, 0.25 = 240,000, Share holders fund = 240,000 * 1 / 0.25

= 9,60,000 , Then Fixed assets = 240,000 *0.75/0.25 = 7,20,000

Shareholders fund = share capital + Reserves and surplus

9,60,000 = share capital + 160,000, There for Share capital = 9,60,000 – 160,000 =8,00,000

Liabilities	Rs	Assets	Rs
Share Capital	800000	Fixed Assets	720000
Reserves and Surplus	160000	Current Assets	
Current Liabilities		Stock	160000
Bank Overdraft	40000	Liquid Assets	240000
Sundry Creditors and Other Current Liabilities	120000		
	1120000		1120000

We can award 1 mark each if Liquid and Current Asset Stock are correctly calculated. And 2 marks if

		Fixed Asset and Share Capital are correctly calculated.
1 4		Net Increase in Working Capital – 80,000; We can give 2 marks for correct calculation of current assets & current liabilities for both the years; 2 marks for correct calculation of networking capital for both the years; and 4 marks for calculation of Networking capital with the mention of Increase or decrease.
1 5		Explanation of fund from operation – 4 marks; Explanation of computation – 4 marks

1 6			

Particulars	Amount	Amount
a) Cash from operating activities		
Net Profit	35000	
Add: Depreciation	20000	
Add: dividend paid	25000	
Adjustment for changes in CA and CL except cash		
Add : Increase in creditors	10000	
Less: Increase in debtors	-25000	
Add: Decrease in Inventory	20000	
Net cash from Operating activities		85000
b)Cash flow from investing activities		
Add: Sale of land	20000	
Less: Purchase of plant and machinery	-50000	
Net cash from Investing activities		-30000
c)Cash flow from financing activities		
Less: redemption of debentures	-60000	
Add: Issue of share capital	40000	
Less: Dividend Paid	-25000	
Net cash from financing activities		-45000
Net cash inflow		10000
Add		
Opening cash balance		50000
Closing cash balance		60000

Cash from operating activities – 2 marks; investing activities – 2 marks;financing activities – 2 marks; Net cash inflow – 2 marks

		PART D (Compulsory Question)	
1 7		Gross Profit – 45000 ; (3 marks); Net Profit – 19650 ; (3 marks) Balance sheet total – 77,500 (4 marks)	

SEMESTER 2

SET 1
UNIVERSITY OF CALICUT ………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 2C 09
Course Name: Marketing Management

Max. Marks: 60		Duration: 3 Hours

PART A		
	Answer all questions, each carries 2 marks.	Marks
1	Define and explain the concept, nature, and importance of marketing.	(2)
2	Explore the factors influencing individual consumer behaviour in the buying process	(2)
3	Describe the levels and patterns of market segmentation.	(2)
4	Discuss the concept of product life cycle stages and its influence on strategic marketing decisions.	(2)
5	Explain the scope and types of marketing research.	(2)

		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Evaluate the effectiveness of different promotion mix strategies in marketing.	(4)
7		Analyse the factors influencing price decisions and discuss pricing strategies.	(4)
8		Explore the roles and functions of channel intermediaries in distribution channels.	(4)
9		Discuss the methods and strategies used in market targeting.	(4)
10		Assess the significance and challenges of organizing a marketing department.	(4)
11		Compare and contrast domestic marketing and international marketing.	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		Evaluate the impact of cultural factors on consumer buying behaviour.	(8)
13		Discuss the levels and patterns of market segmentation in the context of a specific industry.	(8)
14		Explore the concept of green marketing and its relevance in today's business environment.	(8)
15		Assess the importance and challenges of marketing control techniques.	(8)
16		Analyse the changing patterns of consumer behaviour in the era of digital marketing.	(8)
		PART D (Compulsory Question, 10 marks)	
17		XYZ Electronics, a prominent player in the consumer electronics market, found itself at a crossroads amidst the rapid digital transformation in the industry. Faced with changing consumer preferences and emerging technologies, XYZ Electronics grappled with maintaining its traditional market position. The company had to decide whether to adapt its product offerings to align with the latest digital trends or risk falling behind in the fiercely competitive market. As XYZ Electronics contemplates its next move, the challenge lies in striking the right balance between innovation and customer loyalty, ensuring a successful transition into the digital era while maintaining its existing customer base. 1. How can XYZ Electronics strategically adapt its product offerings to align with the latest digital trends without alienating its existing customer base? Provide specific recommendations and potential challenges. 2. In the context of the digital transformation, discuss the strategies XYZ Electronics can implement to foster and enhance customer loyalty. How can the company leverage emerging technologies to strengthen its relationship with customers?	(10)

SET 1

Scheme of Valuation/Answer Key
(Scheme of evaluation (marks in brackets) and answers of problems/key)

UNIVERSITY OF CALICUT
…………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 2C 09

Course Name: Marketing Management

Max. Marks: 60		Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		**Define and explain the concept, nature, and importance of marketing.** Clear definition: 1 mark Explanation of nature and importance: 1 mark	(2)
2		**Explore the factors influencing individual consumer behaviour in the buying process.** Identification and explanation of factors: 2 marks	(2)
3		**Describe the levels and patterns of market segmentation.** Clear description of levels and patterns: 2 marks	(2)
4		**Discuss the concept of product life cycle stages and its influence on strategic marketing decisions.** Explanation of product life cycle stages: 1 mark Influence on strategic marketing decisions: 1 mark	(2)
5		**Explain the scope and types of marketing research.** Clear explanation of scope: 1 mark Identification and explanation of types: 1 mark	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		**Evaluate the effectiveness of different promotion mix strategies in marketing.** Identification and evaluation of promotion mix strategies: 4 marks	(4)
7		**Analyse the factors influencing price decisions and discuss pricing strategies**. Identification and analysis of factors: 2 marks Discussion of pricing strategies: 2 marks	(4)

8		**Explore the roles and functions of channel intermediaries in distribution channels**.	(4)
		Clear explanation of roles and functions: 2 marks	
		Exploration of their importance in distribution channels: 2 marks	
9		**Discuss the methods and strategies used in market targeting.**	(4)
		Identification and discussion of methods: 2 marks	
		Exploration of effective targeting strategies: 2 marks	
10		**Assess the significance and challenges of organizing a marketing department.**	(4)
		Identification and assessment of significance: 2 marks	
		Discussion of challenges and potential solutions: 2 marks	
11		**Compare and contrast domestic marketing and international marketing**.	(4)
		Clear comparison and contrast: 4 marks	

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		**Evaluate the impact of cultural factors on consumer buying behaviour.**	(8)
		Identification and in-depth evaluation of cultural factors: 6 marks	
		Connection to consumer buying behaviour: 2 marks	
13		**Discuss the levels and patterns of market segmentation in the context of a specific industry.**	(8)
		In-depth discussion of levels and patterns: 6 marks	
		Application to a specific industry: 2 marks	
14		**Explore the concept of green marketing and its relevance in today's business environment.**	(8)
		Comprehensive exploration of green marketing: 6 marks	
		Discussion of its relevance in the modern business environment: 2 marks	
15		**Assess the importance and challenges of marketing control techniques.**	(8)
		Evaluation of the importance of marketing control techniques: 4 marks	
		Discussion of challenges and potential solutions: 4 marks	
16		**Analyse the changing patterns of consumer behaviour in the era of digital marketing.**	(8)
		Identification and analysis of changing patterns: 6 marks	
		Connection to the era of digital marketing: 2 marks	

PART D (Compulsory Question)

17		**Case Study**	(10)
		Introduction (2 Marks)	
		1.Identify and analyse the current challenges faced by XYZ Electronics in the market.	
		Identification of challenges related to changing consumer preferences and emerging technologies. **(2 Marks)**	
		In-depth analysis of the potential impact on the traditional market position**. (2 Marks)**	
		2. Propose and justify two marketing strategies for XYZ Electronics to improve brand positioning.	
		Strategic recommendations for adapting product offerings to align with digital trends. **(2 Marks)**	
		Discussion of potential challenges and their mitigation. **(2 Marks)**	

SET 1

UNIVERSITY OF CALICUT   …….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

	Course Code: BUS 2C 10	
	Course Name: Financial Management	
Max. Marks: 60		Duration: 3 Hours

<table>
<tr><td colspan="4" align="center">PART A</td></tr>
<tr><td></td><td colspan="2" align="center"><i>Answer all questions, each carries 2 marks.</i></td><td>Mark s</td></tr>
<tr><td>1</td><td colspan="2">What is meant by profit maximization?</td><td>(2)</td></tr>
<tr><td>2</td><td colspan="2">Discuss the concept of operating leverage</td><td>(2)</td></tr>
<tr><td>3</td><td colspan="2">What does the term discounted payback method mean?</td><td>(2)</td></tr>
<tr><td>4</td><td colspan="2">State the concept of receivables management</td><td>(2)</td></tr>
<tr><td>5</td><td colspan="2">Write a short note on 'Bird in Hand' argument</td><td>(2)</td></tr>
<tr><td colspan="4" align="center">PART B</td></tr>
<tr><td colspan="4" align="center"><i>Answer any FOUR questions from this section. Each question carries 4 marks.</i></td></tr>
<tr><td>6</td><td colspan="2">Describe the concept of time value of money. What are the reasons of its application? Explain the techniques used for adjusting the time value of money.</td><td>(4)</td></tr>
<tr><td>7</td><td colspan="2">Explain Net Income Approach in capital structure theory</td><td>(4)</td></tr>
<tr><td>8</td><td colspan="2">Under what circumstances do the net present value and internal rate of return methods differ?</td><td>(4)</td></tr>
<tr><td>9</td><td colspan="2">Explain the functions of finance manager under modern approach</td><td>(4)</td></tr>
<tr><td>10</td><td colspan="2">Two firms A and B have the following information:

                  Sales   Variable Costs   Fixed Costs

Firm A   1,800   450   900
Firm B   1,500   750   375

You are required to calculate (a) the PV ratio (b) Break-even point (c) The degree of operating leverage for both firms.</td><td>(4)</td></tr>
<tr><td>11</td><td colspan="2">The following information is available in respect of the rate of return on investment (r), the equity capitalisation rate (Ke) and earnings per share (E) of the manufacturing company:
r = (i) 0.12 (ii) .10
ke = 0.11
E = Rs 20
Determine the value of its shares as per Gordon model if the dividend payout ratio is 10%</td><td>(4)</td></tr>
<tr><td colspan="4" align="center">PART C</td></tr>
<tr><td colspan="4" align="center"><i>Answer any THREE questions from this section. Each question carries 8 marks</i></td></tr>
<tr><td>12</td><td colspan="2">What is wealth maximization? How is it superior to profit maximization?</td><td>(8)</td></tr>
<tr><td>13</td><td colspan="2">Explain the MM hypothesis of dividend irrelevance theory.</td><td>(8)</td></tr>
<tr><td>14</td><td colspan="2">A firm whose cost of capital is 10% is considering two mutually exclusive projects – X and Y. The cash flows of the projects are given below. Evaluate both the projects using NPV and Profitability Index

<table><tr><td>Years</td><td>Project X</td><td>Project Y</td></tr><tr><td>0</td><td>-100000</td><td>-70000</td></tr><tr><td>1</td><td>80000</td><td>60000</td></tr><tr><td>2</td><td>80000</td><td>60000</td></tr></table></td><td>(8)</td></tr>
<tr><td>15</td><td colspan="2">Elaborate the factors effecting the determination of working capital</td><td>(8)</td></tr>
<tr><td>16</td><td colspan="2">The following figures relate to two companies (Rupees in lakhs)

                              P Ltd   Q Ltd
Sales   500   1,000</td><td>(8)</td></tr>
</table>

Variable cost	200	300	
Contribution	300	700	
Fixed cost	150	400	
EBIT	150	300	
Interest	50	100	
PBT	100	200	

(i)   You are required to: (a) Calculate the operating, financial and combined leverages for the two companies and (b) Comment on their relative risk positions.

PART D (Compulsory Question, 10 marks)

17 — While preparing a project report on behalf of a client, you have collected the following facts. Estimate the networking capital required for the project. Add 10 percent to your computed figure to allow for contingencies.   **(10)**

Estimated cost per unit of production

Raw material   Rs 80

Direct Labour   Rs 30

Overheads   Rs 65

Total   Rs 175

Additional Information

Selling price Rs 200 per unit

Level of activity 1,04,000 units of production per annum

Raw material in stock, average 4 weeks

Work in progress (Assume full unit of raw material required in the beginning of the manufacturing, other conversion costs are 50%) average 2 weeks

Finished goods in stock, average 4 weeks

Credit allowed by suppliers, average 4 weeks

Credit allowed to debtors, average 8 weeks

Lag in payment of wages, average 1.5 weeks

Cash in hand desired to be maintained Rs 25000

You may assume that the production is carried on evenly throughout the year (52 weeks) and wages or overheads accrue similarly. All sales are on credit basis

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT …….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 2C 10
Course Name: Financial Management

Max. Marks: 60		Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		Profit maximization is the main aim of any business and therefore it is also an objective of financial management. Profit maximization, in financial management, represents the process or the approach by which profits Earning Per Share (EPS) is increased. (1 mark) In simple words, all the decisions whether investment or financing etc. are focused on maximizing the profits to optimum levels. (1 mark)	(2)
2		The leverage related with investment activities is known as operating leverage. It is caused due to fixed operating expenses in the company. Operating leverage may be defined as the company's ability to use fixed operating costs to magnify the effects of changes in sales on its earnings before interest and taxes. (2 marks)	(2)
3		The discounted payback method is a capital budgeting procedure used to determine the profitability of a project. A discounted payback period gives the number of years it takes to break even from undertaking the initial expenditure, by discounting future cash flows and recognizing the time value of money. (2 marks)	(2)
4		Receivables management is a process of managing the account receivables within a business organisation. Account receivables simply mean credit extended by the company to its customers	(2)

		and are treated as liquid assets. (2 marks)	
5		Investors favouring certainty over potential gains, emphasizing current advantages for decision-making – 2 marks	(2)

<div align="center">

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

</div>

6		Time value of money: Money's worth changes over time. – 2 marks It's applied for investment, finance decisions – 1 mark Techniques: discounting, compounding – 1 mark	(4)
7		Crux of the theory – 2 marks Assumptions and Limitations – 2 marks	(4)
8		Non-Conventional Cash Flows: Reinvestment Assumption: Mutually Exclusive Projects: Scale of Investment: (any three points explained – 4 marks)	(4)
9		Investment; Finance and Dividend functions with explanation – 4 marks	(4)
10		PV ratio = 75% & 50% - 1 marks BEP = Rs 1200 & Rs 750 – 1 marks Degree of OL = 3.0 & 2.0 – 2 marks	(4)

11		Apply the formula – P= E (1-b) / (ke-br)]
		
		   i. Ans = Rs 1000; when r = 0.12; ke = .11 and DP ratio = 10%
		   ii. Ans = Rs 100; when r = 0.10; ke = .11 and DP ratio = 10%
		
		For each correct answer = 2 marks
			(4)

<div align="center">

PART C

Answer any THREE questions from this section. Each question carries 8 marks

</div>

12		Explanation – 2 marks; Any three features which makes wealth maximisation superior – 6 marks	(8)
13		Crux of the Theory – 2 marks; Assumptions – 4 marks – Explanation and Limitation – 2 marks	(8)
14		(see tables below)	(8)

Years	Project X	PV Factor	Present Value
0	-100000	1	-100000
1	80000	0.909	72720
2	80000	0.826	66080
			38800

Years	Project X	PV Factor	Present Value
0	-70000	1	-70000
1	60000	0.909	54540
2	60000	0.826	49560
			34100

Profitability Index $(X) = \frac{138800}{100000} = 1.39$

Profitability Index $(Y) = \frac{104100}{70000} = 1.49$

NPV – each correct answer 2 marks (4 marks)
PI – each correct answer 2 marks (4 marks)

15		Any 7 factors explained – 8 marks	(8)
&		Operating Leverage – 2 & 2.33 ; Financial Leverage – 1.5 & 1.5; Combined Leverage – 3 & 3.5 ; For each correct answer 1 mark and for the comments 2 marks	(8)

<div align="center">

& PART D (Compulsory Question)

</div>

17		Estimation of working capital requirements		(10)
		Current Assets		
		Raw materials	640000	
		Work in progress	510000	
		Finished goods	1400000	
		Debtors	2800000	
		Cash in hand	25000	
		Total Current Assets	5375000	

Current Liabilities		
Creditors	640000	
Outstanding wages	90000	
Total current liabilities	730000	
Net working capital	4645000	
Add: 10% margin for contingencies	464500	
Total working capital requirement	5109500	

Total Current assets – 2 marks; Total Current liabilities – 2 marks – Net working capital – 3 marks; Total working capital requirement – 3 marks

SET 1

UNIVERSITY OF CALICUT

…….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 2C 11

Course Name: OPERATIONS MANAGEMENT

Max. Marks: 60   Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Describe the scope and objectives of Operations management	(2)
2		What is Total Quality Management (TQM) and what are its major principles	(2)
3		Define capacity planning in the context of resource management.	(2)
4		Explain the concept of process mapping and its significance in process improvement.	(2)
5		Identify two current global trends in Operations Management.	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Discuss the role of competitive priorities in shaping operations strategy.	(4)
7		Explain how JIT (Just-In-Time) principles contribute to lean operations and quality improvement.	(4)
8		Describe the process and criteria for vendor selection and rating within resource procurement.	(4)
9		Outline the Theory of Constraints and its application in process management.	(4)
10		Analyze the significance of sustainable practices in operations management and provide examples.	(4)
11		Discuss the impact of digital transformation on Operations Management, including the role of AI and Industry 4.0 technologies.	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Evaluate the strategic dimensions of operations management and how they contribute to achieving organizational objectives.	(8)
13		What are the decision variables that an operations manager usually controls in order to ensure efficient utilisation of operational capabilities? Explain with an example	(8)
14		Describe the challenges and strategies involved in global sourcing and its impact on modern day operations	(8)
15		Explain how process improvement techniques, such as Lean Tools and Value Stream Mapping, can enhance productivity and efficiency in manufacturing and service delivery systems.	(8)
16		Discuss the role of project management in operations management and its importance in executing strategic initiatives.	(8)

PART D (Compulsory Question, 10 marks)

17		A leading electronics component manufacturer, is struggling with its current production scheduling system. Despite having a skilled workforce and advanced manufacturing technologies, the company faces recurring issues with meeting delivery deadlines, leading to	(10)

customer dissatisfaction and lost business opportunities. The production process is complex, involving multiple stages with varying processing times and dependencies. Additionally, unexpected machine downtimes and fluctuating demand patterns have further complicated their scheduling efforts. The management team is concerned that their existing scheduling approach does not adequately address these challenges, particularly in optimizing resource allocation and minimizing production bottlenecks. As an expert in operations management with a focus on process efficiency and lean manufacturing, you have been hired to provide a detailed analysis and strategic recommendations.

1. What all factors will be contributing to the Manufacturing Co.'s inability to meet delivery deadlines? Consider aspects such as production process complexity, machine downtimes, and demand variability.

2. How does the existing scheduling system at the Manufacturing Co. fall short in addressing production inefficiencies and bottlenecks? Discuss the impact of these shortcomings on resource allocation and workflow.

3. What strategic recommendations would you propose to enhance the Manufacturing Co.'s production scheduling and minimize bottlenecks? Focus on the potential application of process efficiency techniques and lean manufacturing principles.

<table>
<tr><td colspan="4" align="center">SET 1</td></tr>
<tr><td colspan="4" align="center">Scheme of Valuation/Answer Key
(Scheme of evaluation (marks in brackets) and answers of problems/key)</td></tr>
<tr><td colspan="4" align="center">UNIVERSITY OF CALICUT
…….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR</td></tr>
<tr><td colspan="4" align="center">Course Code: BUS 2C 11</td></tr>
<tr><td colspan="4" align="center">Course Name: OPERATIONS MANAGEMENT</td></tr>
<tr><td colspan="2">Max. Marks: 60</td><td colspan="2" align="right">Duration: 3 Hours</td></tr>
</table>

<table>
<thead>
<tr><th colspan="3" align="center">PART A</th><th></th></tr>
<tr><th></th><th colspan="2"><i>Answer all questions, each carries 2 marks.</i></th><th>Marks</th></tr>
</thead>
<tbody>
<tr><td>1</td><td></td><td>Mention of designing, overseeing, coordinating with other functions, controlling, and improving the production/service process.

Objectives include increasing efficiency, improving quality, ensuring customer satisfaction, and managing resources effectively.</td><td>(2)</td></tr>
<tr><td>2</td><td></td><td>A management approach focused on long-term success through customer satisfaction.

Continuous improvement, customer focus, employee involvement, and process approach.</td><td>(2)</td></tr>
<tr><td>3</td><td></td><td>Determining the production capacity needed to meet changing demands for products.

Importance in ensuring efficient use of resources and meeting customer demand.</td><td>(2)</td></tr>
<tr><td>4</td><td></td><td>Represents the steps in a process to understand and analyze the current state.

Identifies inefficiencies, bottlenecks, and improvement opportunities to enhance productivity and quality.</td><td>(2)</td></tr>
<tr><td>5</td><td></td><td>Digital transformation through AI, IoT, and automation.

Sustainability and green manufacturing practices.</td><td>(2)</td></tr>
<tr><td colspan="3" align="center">PART B</td><td></td></tr>
<tr><td colspan="3" align="center"><i>Answer any FOUR questions from this section. Each question carries 4 marks.</i></td><td></td></tr>
<tr><td>6</td><td></td><td>Explanation of competitive priorities (quality, speed, flexibility, cost).

Influence on operations strategy and decision-making.</td><td>(4)</td></tr>
<tr><td>7</td><td></td><td>JIT principles.

Reduction of waste, improvement in quality, and efficiency in operations.</td><td>(4)</td></tr>
<tr><td>8</td><td></td><td>Identification, evaluation, and selection of vendors based on set criteria.

Criteria examples: Quality, price, reliability, and service.</td><td>(4)</td></tr>
<tr><td>9</td><td></td><td>Explanation of the Theory of Constraints.</td><td>(4)</td></tr>
</tbody>
</table>

		Identifying and managing bottlenecks to improve process flow and throughput.	
10		Importance of sustainability for environmental, social, and economic benefits. Examples: Recycling, energy-efficient processes, sustainable sourcing.	(4)
11		Increased efficiency, data-driven decision-making, enhanced customer experience. Role of AI and Industry 4.0: Automation, predictive maintenance, real-time monitoring.	(4)

<div align="center">

PART C

Answer any THREE questions from this section. Each question carries 8 marks

</div>

12		• Discussion on strategic dimensions such as cost, quality, flexibility, and delivery (4 marks). • Analysis of how these dimensions support organizational goals like competitiveness, customer satisfaction, and market position (4 marks).	(8)
13		• Identification of decision variables such as capacity, inventory levels, workforce, and process technology (4 marks). • Explanation with an example illustrating the impact of these variables on operational efficiency (4 marks).	(8)
14		• Description of challenges such as cultural differences, logistics, quality control, and supply chain risks (4 marks). • Strategies for overcoming these challenges, such as supplier diversification, partnership development, and technology use (4 marks).	(8)
15		• Explanation of process improvement techniques and their principles (4 marks). • Discussion on the application and benefits of these techniques in enhancing productivity, reducing waste, and improving efficiency (4 marks).	(8)
16		• Discussion on the role of project management in planning, executing, and monitoring operations projects (4 marks). • Analysis of its importance in aligning operations with strategic objectives, managing resources, and ensuring timely completion of projects (4 marks).	(8)

<div align="center">

PART D (Compulsory Question)

</div>

17		**Factors contributing to the Manufacturing Co.'s inability to meet delivery deadlines (3 marks)** Production process complexity, which includes the intricate steps and dependencies that can delay the entire production if one stage fails (1 mark). Machine downtimes, referring to the unexpected breakdowns or maintenance that halt production, causing delays (1 mark).	(10)

Demand variability, which challenges the company's ability to forecast accurately and adjust production schedules in real-time to meet fluctuating customer demands (1 mark).

Shortcomings of the existing scheduling system in addressing production inefficiencies and bottlenecks (3 marks)

The current system's lack of flexibility to adapt to unexpected changes in production demands or to accommodate machine downtime, leading to inefficiencies in resource use and workflow disruptions (1 mark).

Inadequate real-time data integration, which prevents timely adjustments to the production schedule, exacerbating bottlenecks and resource allocation issues (1 mark).

The failure to prioritize tasks and processes based on their importance and impact on delivery deadlines, resulting in misallocation of resources and further delays (1 mark).

Strategic recommendations to enhance production scheduling and minimize bottlenecks (4 marks)

Implementation of a dynamic scheduling system that incorporates real-time data analytics to allow for rapid adjustments to production schedules based on machine availability and demand changes (1 mark).

Adoption of lean manufacturing principles, such as continuous improvement and waste reduction, to streamline processes, reduce downtime, and improve overall efficiency (1 mark).

Introduction of process efficiency techniques like Value Stream Mapping to identify and eliminate bottlenecks, ensuring smoother workflow and better resource allocation (1 mark).

Training for staff on lean principles and the use of predictive maintenance strategies to minimize machine downtimes, coupled with an investment in technology for better demand forecasting and scheduling optimization (1 mark).

SET 1
UNIVERSITY OF CALICUT
…….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 2C 12
Course Name: Human Resource Management

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Differentiate between human resource management (HRM) and strategic human resource management (SHRM).	(2)
2		How application-blank makes the process of selection more efficient.	(2)
3		Evaluate 360-degree appraisal method and identify the merits of this method.	(2)
4		What is the role job evaluation in establishing strategic pay plans	(2)
5		Distinguish between lay-off and retrenchment.	(2)

PART B

		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Explain the linkage between sustainability and HRM	(4)

7		Explain the process of doing job analysis	(4)
8		Explain the application of the ADDIE model	(4)
9		Describe the types and importance of benefits and services in the total reward system	(4)
10		Write a short note on the three pillars of fair discipline.	(4)
11		What are the major provisions given in the employment laws related to the social security and welfare?	(4)

	PART C	
	Answer any THREE questions from this section. Each question carries 8 marks	
12	Write a short essay on the trends that shape HRM	(8)
13	What are the different types of interviews and how to conduct an effective interview?	(8)
14	Explain the process of performance appraisal, mentioning at least THREE individual evaluation methods	(8)
15	Explain the financial and non-financial programmes of employee recognition	(8)
16	The role of the leader is very critical in enhancing the retention. Justify.	(8)

	PART D (Compulsory Question, 10 marks)	
17	One of the most basic functions of business management is to establish a compensation scheme that is competitive and equitable and that promotes employee engagement and high performance. Competitive compensation practices are essential to facilitate employee recruitment and retention efforts.

Imagine that you take charge as the HR manager of a company. And it is your responsibility to determine the pay rate for your company. Analyse the existing compensation scheme of the company and describe how you will make the scheme more competitive and fairer. | (10) |

		SET 1	

Scheme of Valuation/Answer Key

(Scheme of evaluation (marks in brackets) and answers of problems/key)

UNIVERSITY OF CALICUT

…….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 2C 12

Course Name: Human Resource Management

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Mention the conceptual clarity on both the concepts	(2)
2		Provide the definition and its usefulness	(2)
3		Based on the merits of 360 method, provide the evaluation	(2)
4		Mention the significance of job evaluation in the process of establishing strategic pay plans	(2)
5		Mention the conceptual clarity on both the concepts	(2)

PART B

		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Mention the theoretical and practical linkage between both the concepts	(4)
7		Explain the steps involved	(4)
8		Mention the model with clear explanation on how to implement it	(4)
9		Mention the types of various benefits and services; and its importance	(4)
10		Mention the three pillars with explanation	(4)
11		Mention the legal provisions with a short description	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Mention the trends with adequate explanation	(8)
13		Mention the various types of interviews and the method by which they can conduct interviews effectively	(8)
14		Provide explanation on the process, short notes on three methods	(8)
15		Mention the financial and nonfinancial programmes with explanations	(8)
16		Critically evaluate the statement by mentioning the why the role is critical.	(8)

PART D (Compulsory Question)

17		Briefly describe the scenario, identify the key problem, mention the likely responses, evaluation of the identified alternatives, and the suggest the best option in the given scenario.	(10)

SET 1

UNIVERSITY OF CALICUT …….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 2C 13
Course Name: Operations Research

Max. Marks: 60		Duration: 3 Hours

<table>
<tr><td colspan="4" align="center">PART A</td></tr>
<tr><td></td><td colspan="2"><i>Answer all questions, each carries 2 marks.</i></td><td>Marks</td></tr>
<tr><td>1</td><td colspan="2">Explain the role of Operations Research in Decision Making.</td><td>(2)</td></tr>
<tr><td>2</td><td colspan="2">Prove that <i>the dual of the dual of a given primal is again a primal</i>, using an example.</td><td>(2)</td></tr>
<tr><td>3</td><td colspan="2">List down the different customer behaviors in a queue.</td><td>(2)</td></tr>
<tr><td>4</td><td colspan="2">Write a note on Slack and surplus variable?</td><td>(2)</td></tr>
<tr><td>5</td><td colspan="2">Define payoff matrix of a game.</td><td>(2)</td></tr>
<tr><td colspan="4" align="center">PART B</td></tr>
<tr><td colspan="4" align="center"><i>Answer any FOUR questions from this section. Each question carries 4 marks.</i></td></tr>
</table>

6. Solve the following LPP by graphical method

Max Z = 100 x_1 + 40 x_2

Subject to

5 x_1 + 2 x_2 ≤ 1000

3 x_1 + 2 x_2 ≤ 900

x_1 + 2 x_2 ≤ 500

x_1, x_2 ≥ 0   (4)

7. Explain Game theory. What are the prerequisites for Game theory?   (4)

8. Obtain initial feasible solution for the following Transportation table using VAM   (4)

Source	Destination			Supply	
	A	B	C		
1	2	7	4	5	
2	3	3	1	8	
3	5	4	7	7	
4	1	6	2	14	
	7	9	18		

Method.

| 9 | | T. Bone Pucket, a corporate raider, has acquired a textile company and is contemplating the future of one of its major plants, located in South Carolina. Three alternatives decisions are being considered: Expand the plant, Maintain the status and Sell the plant now. If one of the first two alternatives is chosen, the plant will still be sold at the end of a year. The amount of profit that could be earned by selling the plant in a year depends on foreign market conditions, including the status of trade embargo bull in Congress. The following payoff table describes this | (4) |

Decision		Good Foreign Competitive Conditions	Poor Foreign Competitive Conditions	decision situation: Assume
Expand		$800,000	$500,000	that it is possible to
Maintain	status quo	$1,300,000	$-150,000	
Sell	now	$320,000	$320,000	estimate a

		probability of 0.70 that good foreign competitive conditions will exist and probability of .30 that poor conditions will exist. Determine the best decision by using expected value and expected opportunity loss.	
10		Explain the purpose of Poisson and exponential distributions in Queuing theory	(4)
11		Explain Monte Carlo simulation? Write down the Business applications of Monte Carlo simulation	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Discuss the Time and Cost overrun in projects and its effects?	(8)
13		Explain the algebraic method to solve the game theory?	(8)
14		What are the assumptions of Assignment problem?	(8)
15		What is decision tree? Trace it's applications.	(8)
16		A store has requested a manufacturer to produce pants and sports jackets. For materials, the manufacturer has 750 m^2 of cotton textile and 1000 m^2 of polyester. Every pair of pants (1 unit) needs 1 m^2 of cotton and 2 m^2 of polyester. Every jacket needs 1.5 m^2 of cotton and 1 m^2 of polyester. The price of the pants is fixed at Rs 50 and the jacket at Rs 40. What is the number of pants and jackets that the manufacturer must give to the stores so that these items obtain a maximum sale?	(8)

PART D (Compulsory Question, 10 marks)

17		An R & D project has a list of tasks to be performed whose time estimates are given in the Table 8.11, as follows.	(10)

Activity	Activity Name	t_o	t_m	t_p
1-2	A	4	6	8
1-3	B	2	3	10
1-4	C	6	8	16
2-4	D	1	2	3
3-4	E	6	7	8
3-5	F	6	7	14
4-6	G	3	5	7
4-7	H	4	11	12
5-7	I	2	4	6
6-7	J	2	9	10

a. Draw the project network.

b. Find the critical path.

c. Find the probability that the project is completed in 19 days. If the probability is less than 20%, find the probability of completing it in 24 days.

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT …….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 2C 13
Course Name: Operations Research

Max. Marks: 60		Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		Financing and Investment Polices Selling, Promotion, Marketing & Publicity Acquisition, Investigation, Manufacturing and Personnel Management Research and Development (Each Point 0.5 Mark)	(2)
2		In linear programming, duality implies that each linear programming problem can be analysed in two different ways but would have equivalent solutions. Any LP problem (either maximization and minimization) can be stated in another equivalent form based on the same data. The new LP problem is called dual linear programming problem or in short dual. In general, it is immaterial which of the two problems is called primal or dual, since the dual of the dual is primal. – 1Mark Example required – 1 Mark	(2)
3		Queue behavior: how customers react to the situation of the queue. balk: Customers leave when they see the queue is too long. renege: Customers leave after being in the queue when they see the queue is moving too slowly. jockey: Customers move from one queue to another if they think they have chosen a slow line. (1 Mark/ Point)	(2)
4		Slack variables: added when the original problem has a "≤" constraint. Original: $x1 + 2 x2 + x3 - x4 \leq 5$; After slack: $x1 + 2 x2 + x3 - x4 + s1 = 5$; $s1 \geq 0$ Original: $D + E \leq 32$ After slack: $D + E + s2 = 32$ $s2 \geq 0$ Note: Slacks are (implicitly) part of the original problem. $s2 = 32 – D – E$ is the "unsatisfied demand for e-readers." (1 Mark) Surplus - Surplus variable is a type of additional variable in the Simplex method of Linear Programming Problems. It refers to indicate the quantity of unused resources by which the left-hand side of the referred equation exceeds the minimum limit. Example (1 Mark)	(2)
5		In a two person zero or constant sum game, the resulting gain can be represented in the form of a matrix which is called Pay-off Matrix or Gain matrix. In other words payoff matrix is a table in which strategies of one player are listed in rows and those of the other player in columns and the cells show payoffs to each player such that the payoff of the row player is listed first. It summarizes the necessary information and helps us determine whether a dominant strategy or Optimal Mixed strategy or a Nash equilibrium exist.	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Drawing the straight lines of constrains. (1 mark) Drawing of graph (1 Mark) Corner point identification and table formulation (1 Mark)	(4)

Corner points	Value of
(200,0)	20000
(0, 250)	10000
(125, 187.5)	20000

Optimal solution Calculation (1 Mark)

| 7 | | Game theory is an approach to modelling behaviour in situations where the outcome of your | (4) |

		decisions depends on the decisions of others. Definition, examples, key elements in game theory (2 Mark) **Prerequisite** required for game theory (2 Mark) Sum of gains and loss Types of games One-person games Two person zero sum game (with two players) Two person zero sum game (with more than two players) Games which are not TPZS Positive-sum game Perfect games Imperfect games Finite games Cooperative games Pay off Strategy and its types	
8		Checking of Balancing, Total demand = Total Supply – (1 mark) Penalty calculation and allocation (2 Mark) The IBFS is = (2*5)+(3*2)+(1*6)+(4*7)+(1*2)+(2*12) = 76.(1 Mark)	(4)
9		Expected value calculation (2 Mark) Expected value of perfect information(2 Mark)	(4)
10		Poisson Queues (2 Mark) A Poisson queue is a queuing model in which the number of arrivals per unit of time and the number of completions of service per unit of time, when there are customers waiting, both have the Poisson distribution. The Poisson distribution is good to use if the arrivals are all random and independent of each other This distribution lends itself well to modeling customer interarrival times or service times for a number of reasons. The first is the fact that the exponential function is a strictly decreasing function of t. This means that after an arrival has occurred, the amount of waiting time until the next arrival is more likely to be small than large.(2 Mark)	(4)
11		**A Monte Carlo simulation** uses repeated sampling to obtain the statistical properties of some phenomenon (or behavior). For example: drawing a large number of pseudo-random uniform variables from the interval [0,1] at one time, or once at many different times, and assigning values less than or equal to 0.50 as heads and greater than 0.50 as tails, is a Monte Carlo simulation of the behavior of repeatedly tossing a coin. (1 Mark) **Types of Simulation (1 Mark)** Deterministic Stochastic Dynamic Static **Characteristics of a high-quality Monte Carlo simulation: (1 Mark)** • the (pseudo-random) number generator has certain characteristics (e.g. a long "period" before the sequence repeats) • the (pseudo-random) number generator produces values that pass tests for randomness • there are enough samples to ensure accurate results • the algorithm used is valid for what is being modeled • it simulates the phenomenon in question **Steps of Monte Carlo simulation (1 Mark)** Monte Carlo methods vary, but tend to follow a particular pattern: 1. Define a domain of possible inputs 2. Generate inputs randomly from a probability distribution over the domain 3. Perform a deterministic computation on the inputs 4. Aggregate the results	(4)
		PART C	

12		**A cost overrun,** also known as a cost increase or budget overrun, involves unexpected costs incurred in excess of budgeted amounts due to an under estimation of the actual cost during budgeting. Cost overrun should be distinguished from cost escalation, escalation is avoided with an anticipated growth in a budgeted Due to change in the government policy, price increase due to transportation cost, and force majeure reasons The cost overrun in the projects appears to be common phenomena and many of the organizations concentrate only on the claims but a scientific back analysis into this aspect appears to be very scares unlimited, although a large volume of research has been done on various aspects of cost escalation and its effects	(8)

EFFECTS

1. Time overrun: When the stipulated completion time is pushed forward, the project is said to have experienced schedule overrun. Schedule overrun refers to the late completion or late delivery, from the time specified or agreed by all parties of the construction project.

2. Schedule overrun refers to the late completion or late delivery, from the time specified or agreed by all parties of the construction project. Disputes normally come down in assessing three aspects of overruns: whose fault was it or who caused the overrun, how much delay occurred and, consequently, what monetary awards should be made

3. Litigation: Disputes, due to schedule overruns, can lead to court cases for resolution especially when large penalties are at stake

4. Total project abandonment: schedule overruns in project execution could lead to total abandonment if issues leading to the overruns are not resolved timeously

(4 Mark)

How to deal with project overrun

• Understand the real reasons of budget overrun

• Underestimated or wrong calculation: One of the major reasons for cost overrun is a wrong estimation of the budget. Without change orders, it can be difficult to turn the situation in your favour. Now the real lesson you can learn from this mistake is to understand the error in the estimate. It could be that the project was underestimated on purpose, hoping to turn it around in long run. Whatever the reason it needs to be clear and to avoid it in future.

• Scope creep. Some customers continuously asking for small changes, explaining how easy it would be for you as a contractor to do them, at the same time not expecting to get billed or promising bigger junks of work for that in the future. But in reality, these "small requests" sooner or later go out of control. Going the extra mile will quickly become an expectation for the customer. It's like "feeding the monster". Instead, you should agree on the scope with the client, finish what you have promised and get paid for all what is out of the scope. And by the way, never use the words easy, fast, simple when talking about your works. These are the words explaining other people's works.

• Long-term economic effect. This can be a budget overrun reason when your project is very long, it was stopped for some period or the project calculation was done at the low economy time and the economy now is growing fast. It would be wise to have some "fuse" in your contract for such situations. Some standard contracts have standard conditions, so you can take a closer look at your contract and see if you can review your budget with customer according to contract conditions.

• Bad cost management & cost control. The worst thing is when you find out that your project is over budget at the end of a project. Usually, it is closely related to a bad budget management. It is very common when the times are good, less attention is paid for budget and cost control. Everybody feels confident and the overview looks nice. But if you don't pay attention to your project expenses, it can happen that you will be invoiced higher than agreed from subcontractors, scope changes are not counted accordingly, and some big unpaid invoices was forgotten into a desk drawer, what would eat the project's profit just like that. Make sure that you have a trustful real-time information about your budget situation, and if not, take actions to have it as soon as

		possible. (4 mark)	
13		A play's (p, 1 - p) where: $$p = \frac{d - c}{(a + d) - (b + c)}$$ (3 mark) B play's (q, 1 - q) where: $$q = \frac{d - b}{(a + d) - (b + c)}$$ (3 mark) Value of the game, $$V = \frac{ad - bc}{(a + d) - (b + c)}$$ (2 mark)	
14		The assignment problem is a special type of transportation problem, where the objective is to minimize the cost or time of completing a number of jobs by a number of persons. Assumptions in Assignment problem Number of jobs is equal to the number of machines or persons. Each man or machine is assigned only one job. Each man or machine is independently capable of handling any job to be done. Assigning criteria is clearly specified (minimizing cost or maximizing profit). Explain with Example (2 mark/ Point)	(8)
15		Decision Trees (DTs) are a non-parametric supervised learning method used for classification and regression. The goal is to create a model that predicts the value of a target variable by learning simple decision rules inferred from the data features. A tree can be seen as a piecewise constant approximation. – (1 mark) **Components of DT** - (2 mark) **Advantages of decision trees are:** (1 mark) • Trees can be visualised. • Requires little data preparation. dummy variables need to be created • The cost of using the tree (i.e., predicting data) is logarithmic in the number of data points used to train the tree. • Able to handle both numerical and categorical data. • Uses a white box model • Possible to validate a model using statistical tests. That makes it possible to account for the reliability of the model. • Performs well even if its assumptions are somewhat violated by the true model from which the data were generated. **The disadvantages of decision trees include:** (1 mark) **Applications of Decision Trees** (3 mark) 1. Assessing prospective growth opportunities 2. Using demographic data to find prospective clients. 3. Serving as a support tool in several fields Decision trees can also be used in operations research in planning logistics and strategic management. They can help in determining appropriate strategies that will help a	(8)

16		First we identify the decision variables as x = number of pants, and y = number of jackets Then we write the objective function as Z =50x+40y (1 Mark) Constraints (2 Mark) x+1.5y≤750 2x+3y≤1500 2x+y≤1000 As the number of pants and jackets are natural numbers, there are two more constraints, x≥0 y≥0	
		company achieve its intended goals. Other fields where decision trees can be applied include engineering, education, law, business, healthcare, and finance.	

PART D (Compulsory Question)

17		Drawing of network – 2 Mark Expected value calculation – 1 mark the critical path is identified as 1-4, 4-6, 6-7, with a project duration of 22 days. - 3 mark Variance – 2 marks Probability calculation – 81.33% - 2 mark	(10)

SET 1
UNIVERSITY OF CALICUT …….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 2C 14
Course Name: Data Analytics and Computing

Max. Marks: 60			Duration: 3 Hours
PART A			
	Answer all questions, each carries 2 marks.		Marks

1		What is Data Analytics?	(2)
2		Explain the three different types of analytics.	(2)
3		Define Big Data Analytics.	(2)
4		Describe the Gradient Descent method.	(2)
5		Define the term "Measure of Central Tendency".	(2)

PART B
Answer any FOUR questions from this section. Each question carries 4 marks.

6		How is the interquartile range (IQR) calculated, and what does it represent?	(4)
7		Explain how Descriptive analytics can be done using SPSS to understand a given dataset.	(4)
8		Explain the steps involved in solving an LPP using Excel solver.	(4)
9		Discuss the importance of data privacy and security in Business Analytics.	(4)
1 0		Differentiate between Linear and Non-Linear Optimization.	(4)
1 1		What is the difference between Simple and Multiple Linear Regression?	(4)

PART C
Answer any THREE questions from this section. Each question carries 8 marks

1 2		How does R programming facilitate correlation and regression analysis?	(8)
1 3		Explain the role of clustering algorithms in Predictive Analytics, focusing on K-means and Hierarchical Clustering.	(8)
1 4		Analyze the ethical considerations and challenges in Business Analytics related to data privacy and security.	(8)
1 5		Discuss how the integration of analytics has transformed industries and what future trends are anticipated in the field of analytics.	(8)
1 6		Conduct a thorough analysis of the role of analytics in enhancing the effectiveness of HRM practices.	(8)

PART D (Compulsory Question, 10 marks)

1 7		Case study - Forecasting Orders and Recipes at Blue Apron	(10)
		For meal kit delivery service Blue Apron, understanding customer behavior and preferences is vitally important to its success. Each week, the company presents subscribers with a fixed menu of meals available for purchase and employs predictive analytics to forecast demand, with the aim of using data to avoid product spoilage and fulfill orders.	
		To arrive at these predictions, Blue Apron uses algorithms that take several variables into account, which typically fall into three categories: customer-related features, recipe-related features, and seasonality features. Customer-related features describe historical data that depicts a given user's order frequency, while recipe-related features focus on a subscriber's past recipe preferences, allowing the company to infer which upcoming meals they're likely to order. In the case of seasonality features, purchasing patterns are examined to determine when order rates may be higher or lower, depending on the time of year.	
		Through regression analysis—a statistical method used to examine the relationship between variables—Blue Apron's engineering team has successfully measured the precision of its forecasting models. The team reports that, overall, the root-mean-square error—the difference between predicted and observed values—of their projection of future orders is consistently less than six percent, indicating a high level of forecasting accuracy.	
		By employing predictive analytics to better understand customers, Blue Apron has improved its user experience, identified how subscriber tastes change over time, and recognized how shifting preferences are impacted by recipe offerings.	
		(Courtesy – HBS online)	
		Answer the following questions	

<table>
<tr>
<td></td>
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<td>
a. Currently, regression analysis is used. Are there other machine learning algorithms that could be explored for improved forecasting accuracy? Explain.
b. How does Blue Apron ensure the privacy and security of customer data when using it for predictive analytics?
c. What role do seasonality features play in Blue Apron's predictive analytics process, and how does the company leverage them to anticipate fluctuations in order rates?
</td>
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</table>

<table>
<tr><td colspan="3" align="center">SET 1</td></tr>
<tr><td colspan="3" align="center">Scheme of Valuation/Answer Key
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<tr><td colspan="3" align="center">UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR</td></tr>
<tr><td colspan="3" align="center">Course Code: BUS 2C 14</td></tr>
<tr><td colspan="3" align="center">Course Name: Data Analytics and Computing</td></tr>
<tr><td>Max. Marks: 60</td><td></td><td align="right">Duration: 3 Hours</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td colspan="3" align="center">PART A</td></tr>
</table>

		Answer all questions, each carries 2 marks.	Marks
1		Data analytics converts raw data into actionable insights. It includes a range of tools, technologies, and processes used to find trends and solve problems by using data. Data analytics can shape business processes, improve decision-making, and foster business growth.	(2)
2		The three types of analytics are: a. Descriptive Analytics: Analyzes past data to understand what happened. b. Predictive Analytics: Uses statistical models to predict future outcomes. c. Prescriptive Analytics: Provides recommendations on possible actions to achieve desired outcomes.	(2)
3		Big Data Analytics involves examining large and varied data sets to uncover hidden patterns, unknown correlations, and other insights.	(2)
4		The Gradient Descent method is an optimization algorithm used to minimize a function by iteratively moving towards the minimum value.	(2)
5		A Measure of Central Tendency is a statistical measure that identifies a single value as representative of an entire dataset.	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Interquartile Range (IQR): (2+2) ● Calculated as the difference between the upper and lower quartiles (Q3 - Q1), representing the middle 50% of data spread. ● Shows the range where most data points lie, helpful for understanding data variability.	(4)
7		Descriptive Analytics in SPSS: (at least 3 points) ● Use "Descriptives" tool to summarize data with measures like mean, median, standard deviation, and frequency tables. ● Analyze distributions with histograms and boxplots. ● Explore relationships between variables with cross-tabulations and correlations.	(4)
8		Solving LPP with Excel Solver: (at least 3 points) ● Set up your objective function and constraints as formulas in your spreadsheet. ● Define your decision variables. ● Use "Solver" add-in to find the optimal solution that maximizes/minimizes your objective while meeting constraints.	(4)
9		Data Privacy and Security: (at least 3 points) ● Crucial to protect sensitive information and ensure user trust. ● Involves measures like data encryption, access controls, and compliance with regulations. ● Protects from data breaches, misuse, and privacy violations.	(4)
10		Linear vs. Non-Linear Optimization: (at least 3 points) ● Linear: Objective function and constraints are linear equations. ● Non-Linear: Involves curved relationships or complex functions. ● Linear methods are simpler, non-linear ones require specialized algorithms.	(4)
11		Simple vs. Multiple Linear Regression: (at least 3 points)	(4)

		• Simple: Predicts one dependent variable from one independent variable. • Multiple: Predicts a dependent variable from two or more independent variables. • Both model linear relationships, multiple regression captures more complex interactions.	
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		Correlation and Regression Analysis in R Programming: (at least 4 points) • R, a powerful statistical programming language, provides built-in functions for calculating correlations and performing regression analysis. • For correlation, the cor() function computes correlation coefficients (Pearson, Spearman, etc.) between variables. • For regression, functions like lm() allow fitting linear models, assessing coefficients, and predicting outcomes. • R's visualization capabilities (e.g., scatter plots, regression lines) aid in understanding relationships.	(8)
13		Clustering Algorithms in Predictive Analytics: (at least 4 points) • K-means: Divides data into clusters based on similarity. It minimizes intra-cluster variance by iteratively adjusting centroids. • Hierarchical Clustering: Creates a tree-like structure (dendrogram) by merging or splitting clusters. • Useful for exploring hierarchical relationships. • Both algorithms help identify patterns, segment customers, and optimize marketing strategies.	(8)
14		Ethical Considerations in Business Analytics: (at least 4 points) • Data Privacy: Balancing data utilization with privacy rights. Anonymization, consent, and compliance are crucial. • Security: Safeguarding data from breaches, unauthorized access, and cyber threats. • Bias: Addressing biases in algorithms and ensuring fairness. • Transparency: Explaining analytics processes to stakeholders.	(8)
15		Analytics' Impact on Industries and Future Trends:(at least 4 points) • Transformation: Analytics has revolutionized decision-making across sectors (e.g., healthcare, finance, retail). • AI and ML Integration: Automation, predictive models, and personalized recommendations. • IoT Analytics: Leveraging data from connected devices. • Ethics and Explainability: Striking a balance between innovation and ethical use of data.	(8)
16		Enhancing HRM Practices through Analytics: (at least 4 points)	(8)

		● Recruitment: Predictive models for candidate fit. ● Employee Engagement: Sentiment analysis, feedback loops. ● Retention: Identifying flight risks. ● Workforce Planning: Predicting skill gaps and optimizing workforce allocation. ● Performance Metrics: Data-driven performance evaluations.		
		PART D (Compulsory Question)		
1 7		a. Yes, Blue Apron could explore other machine learning algorithms. Regression is good for linear relationships, but customer behavior can be complex and non-linear. Algorithms like random forests, neural networks, or gradient boosting machines could capture nuances and improve accuracy. b. Privacy and security are crucial. Blue Apron can use anonymization, data encryption, and access control to safeguard data. Transparency about data usage and adherence to regulations like GDPR are also important. c. c. Seasonality features help anticipate order fluctuations. By analyzing historical data on holidays, weather, and time of year, Blue Apron can predict periods of higher or lower demand. This helps adapt inventory and marketing to avoid spoilage and meet customer needs.	(10)	

SET 1
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 2C 15			
Course Name: Business Research Methods			
Max. Marks: 60			Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Mar ks
1		What is Business Research?	(2)
2		What is snowball sampling?	(2)
3		What is a questionnaire?	(2)
4		What is coding in data processing?	(2)
5		What is bibliography?	(2)

		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Write a short note on Ex post facto research.	(4)
7		Discuss the steps involved in research process	(4)
8		Write a short note on Reliability and Validity	(4)
9		Differentiate between Type I error and Type II error	(4)
1 0		What is hypothesis? What are its uses in research?	(4)
1 1		What are the considerations in writing a good research report?	(4)

		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
1 2		Discuss the importance of research in managerial decision making	(8)
1 3		What is research design? Discuss the types of design and elucidate the importance of design in research.	(8)
1 4		What is secondary data? How is it different from primary data? What are the methods and techniques of collecting secondary data?	(8)
1 5		MicroSwift estimated last year that 35% of their potential buyers were doubtful in buying their new operating system. After an advertising campaign to reassure the public, MicroSwift surveyed 3000 people and found 950 were still doubtful. At the 5% significance level, can the company conclude the proportion of skeptical people has decreased?	(8)
1 6		Discuss different parts of a research report.	(8)

		PART D (Compulsory Question, 10 marks)	

1 7		Indicate the type of scale (nominal, ordinal, interval, or ratio) that is being used in each of the following questions.
		 a. How large is the market share for shampoos?
		 b. In which of the following functional areas of management do you wish to specialize in the second year?
		    i. Marketing
		    ii. Finance
		    iii. HR
		    iv. Operations
		 c. State the order of your preference of the following colours.
		    i. Grey
		    ii. White
		    iii. Blue
		    iv. Green
		    v. Black
		 d. Was the Research Methodology course difficult to understand?
			(10)

	Yes _____ No_____ e. How do you rate the quality of food at the Golden Dragon restaurant? 1= very poor, 2= Poor, 3 = Neither good nor poor, 4=Good, 5=Very good	

SET 1			
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)			
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR			
Course Code: BUS 2C 15			
Course Name: Business Research Methods			
Max. Marks: 60			Duration: 3 Hours
PART A			
		Answer all questions, each carries 2 marks.	Marks
1		Business that involves establishing objectives and gathering relevant information to solve business issues. One can conduct a business research to answer a business related questions such as "what is the target market of my product"? *(Definition – 1 mark, one example – 1 mark)*	(2)

2		Non-probability sampling method which is a restrictive multi-stage sampling in which initially certain number of sampling units are randomly selected. Later additional sampling units are selected based on referral process	(2)
3		A tool for collecting information to describe, compare, or explain an event or situation, as well as, knowledge, attitudes, behaviours, and/or sociodemographic characteristics of a particular target group	(2)
4		Process of assigning numerals or other symbols to answers so that responses can be put into a limited number of categories or classes.	(2)
5		A bibliography is a list of books, scholarly articles, speeches, private records, diaries, interviews, laws, letters, websites, and other sources you use when researching a topic and writing a paper. The bibliography appears at the end.	(2)

PART B
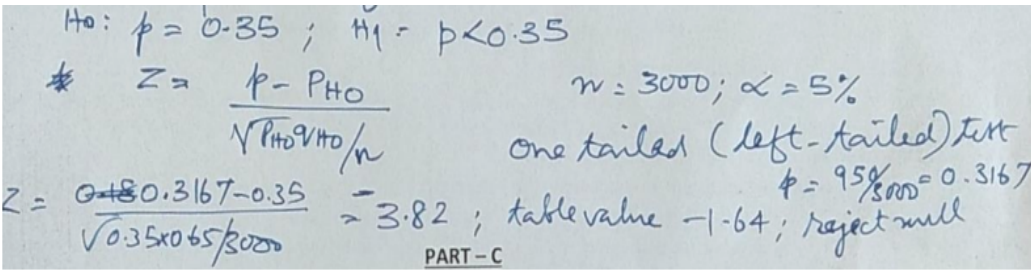
Answer any FOUR questions from this section. Each question carries 4 marks.

6		Ex post facto design is a quasi-experimental study examining how an independent variable, present prior to the study, affects a dependent variable • An ex post facto research design is a method in which groups with qualities that already exist are compared on some dependent variable. Also known as "after the fact" research, an ex post facto design is considered quasi-experimental because the subjects are not randomly assigned -they are grouped based on a particular characteristic or trait. Give an example	(4)
7		Identify a problem- Problem formulation- Literature Review-Setting Objectives and hypotheses- research design-data collection- data analysis and interpretation- report writing	(4)
8		Reliability: The extent to which the results can be reproduced when the research is repeated under the same conditions. It can be assessed by checking the consistency of results across time, across different observers, and across parts of the test itself. Validity: The extent to which the results really measure what they are supposed to measure. Assessed by checking how well the results correspond to established theories and other measures of the same concept. *(2 marks for each)*	(4)
9		A one-tailed test results from an alternative hypothesis which specifies a direction. i.e. when the alternative hypothesis states that the parameter is in fact either bigger or smaller than the value specified in the null hypothesis. A two-tailed test results from an alternative hypothesis which does not specify a direction. i.e. when the alternative hypothesis states that the null hypothesis is wrong. The main difference between one-tailed and two-tailed tests is that one-tailed tests will only have one critical region whereas two-tailed tests will have two critical regions.	(4)
10		Hypothesis is an assumption made based on some evidence. Hypothesis helps in making an observation and experiments possible; It becomes the start point for the investigation; Hypothesis helps in verifying the observations; It helps in directing the inquiries in the right direction	(4)
11		The report should state the purpose; problem statement; The report should emphasize the important information; the report should not mislead the reader; use credible sources, cite references properly and present data accurately; Clarity- use clear and concise language, organize the content logically and avoid jargons; plan your report; after completing the report, read it carefully and revise/edit for clarity, coherence and correctness. The report should have reliability and objectivity	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Research empowers managers to make informed, data-driven decisions, leading to better outcomes and organizational success. Informed decision making: Managers can't make effective choices without	(8)

		understanding the context, options, and potential outcomes. Research helps them gather relevant information, analyse data, and evaluate alternatives. Problem Identification: Research helps identify problem areas within an organization. Data-driven insights: Research collects and analyzes data, providing insights into customer behavior, market dynamics, financial performance, and more. Risk assessment: Research helps assess risks associated with different decisions. By understanding potential pitfalls, managers can mitigate risks and make more calculated choices. *(for similar relevant 4 points- give 8 marks; 2 each)*	
1 3		Conceptual structure within which research is conducted; arrangement of conditions for collection and analysis of data taking the purpose and economy into consideration *(2marks)* Exploratory and conclusive; Descriptive and Causal; cross-sectional and longitudinal; single cross-sectional and multi cross-sectional (3 marks) • Advance planning; it is a road map; minimum flaws when design is done; organized work; helps to give comprehensive review *(3 marks)*	(8)
1 4		Data already collected and compiled by some other researcher or investigative body. It need not be always research-specific. Since the information is already recorded and published in a structured format, the researcher can quickly access and manage the data. *(2 marks)* Primary data collected directly from the respondents; or first-hand report *(2 marks)* Generally it is not too expensive to collect secondary data; published data, computer stored data, syndicated data sources *(4 marks)*	(8)
1 5		One sample test for proportion The company can conclude that the proportion of skeptical people has decreased. (*setting hypothesis- 2 marks, formula and steps=2, correct answer=2, interpretation=2)*	(8)
1 6		Prefatory items (title page, declaration, acknowledgment, Table of contents, list of tables, list of graphs), Body of the report (theoretical background, statement of the problem, review of literature, scope of the study, objectives, hypothesis, definition, model, methodology, sources of data, sampling, data collection instruments, fieldwork, data analysis, limitations, results, findings, summary), terminal items (bibliography, complex tables, copy of data collection instruments) *(Prefatory – 3 marks, Body parts – 3 marks, Terminal parts –2 mark)*	(8)
		PART D (Compulsory Question)	
1 7		a. Ratio b. Nominal c. ordinal d. nominal e. interval b. (*2 marks for each correct answer)*	(10)

For question 15, handwritten work:

$H_0: p = 0.35 \; ; \; H_1 : p < 0.35$

$Z = \dfrac{p - P_{H0}}{\sqrt{P_{H0} q_{H0}/n}}$

$n = 3000; \; \alpha = 5\%$

One tailed (left-tailed) test

$p = 95\%/3000 = 0.3167$

$Z = \dfrac{0.3167 - 0.35}{\sqrt{0.35 \times 0.65/3000}} = 3.82$; table value -1.64 ; reject null

PART-C

SET 1

UNIVERSITY OF CALICUT
…….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 2C 016
Course Name: Corporate Governance and Ethics

Max. Marks: 50			Duration: 3 Hours

PART A	

	Answer all questions, each carries 2 marks.	Marks
1	Define Corporate Governance.	(2)
2	List out the different theories of Corporate Governance	(2)
3	Explain the role of Ethics in corporates	(2)
4	Compare the different models of Corporate governance	(2)
5	Define CSR and its importance for corporates.	(2)

PART B	
Answer any FOUR questions from this section. Each question carries 3 marks.	
6	Compare the CG practices of Japan and Germany	(4)

7		Outline a policy for combating Ethical issues relating to computer applications in corporates	(4)
8		Explain the role of CSR as a Strategic Business tool for Sustainable development	(4)
9		Illustrate the role of CG employed in organizations with an example	(4)
10		Explain in detail on the CSR Legislation In India	(4)
11		Distinguish between Ethics and Values in organizations	(4)
PART C			
Answer any THREE questions from this section. Each question carries 6 marks			
12		Evaluate the different models of CSR in India	(8)
13		Develop a model for encouraging Ethical behavior between employees and managers in organizations	(8)
14		Create a model of CG according to the different committees of CG in India	(8)
15		Integrate the legal aspects of CG based on the different Acts.	(8)
16		Compare and contrast the different views of Business Ethics.	(8)
PART D (Compulsory Question)			
17		Enron – World com – AIG Insurance – Baring Bank – Lehman Brother- Satyam - Tata – Sahara – Harshad Mehta – Mundra. **(Any one can be chosen)**	(10)

SET 1
Scheme of Valuation/Answer Key   (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT   …….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 2C 016
Course Name: Corporate Governance and Ethics

Max. Marks: 60			Duration: 3 Hours
PART A			
Answer all questions, each carries 2 marks.			
1		**Define Corporate Governance.** Clear definition: 1 mark Explanation of key components: 1 mark	
2		**List out the different theories of Corporate Governance.** Comprehensive list of theories: 2 marks	
3		**Explain the role of ethics in corporates.** Identification and explanation of the role of ethics: 2 marks	
4		**Compare the different models of corporate governance**. Detailed comparison of models: 2 marks	
5		**Define CSR and its importance for corporates.** Clear definition of CSR: 1 mark Explanation of its importance: 1 mark	
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			

6		**Compare the CG practices of Japan and Germany.** overview of Corporate Governance practices in Japan (1 mark). Overview of Corporate Governance practices in Germany (1 mark). Key similarities and differences between CG practices (1 mark). Impact of cultural and legal factors on CG practices (1 mark).
7		**Outline a policy for combating Ethical issues relating to computer applications in corporates.** Identification of common ethical issues (1 mark). Policy components addressing these issues (2 marks). Strategies for implementation and enforcement (1 mark).
8		**Explain the role of CSR as a Strategic Business tool for Sustainable development**. Definition and scope of CSR (1 mark). Integration of CSR as a strategic business tool (2 marks). Examples of successful CSR initiatives (1 mark).
9		**Illustrate the role of CG employed in organizations with an example.** Overview of Corporate Governance principles (1 mark). Illustrative example demonstrating the application of CG (2 marks). Discussion of positive outcomes and challenges (1 mark).
10		**Explain in detail on the CSR Legislation in India.** Overview of CSR legislation in India (1 mark). Key requirements and obligations for corporations (2 marks). Impact on corporate behaviour and societal contributions (1 mark).
11		**Distinguish between Ethics and Values in organizations.** Definition and explanation of ethics (1 mark). Definition and explanation of values (1 mark). Key distinctions between ethics and values (1 mark). The practical application of ethics and values (1 mark).
	PART C	
	Answer any THREE questions from this section. Each question carries 8 marks	
12		**Evaluate the different models of CSR in India.** Overview of prominent CSR models in India (2 marks). Evaluation of effectiveness based on societal impact (3 marks). Examination of industry-specific variations (2 marks). Recommendations for improvement (1 mark).
13		**Develop a model for encouraging Ethical behaviour between employees and managers in organizations.** Key components of an ethical behaviour model (2 marks). Strategies for promoting ethical behaviour at all levels (3 marks). Integration of ethical considerations into performance evaluations (2 marks). Mechanisms for reporting and addressing ethical concerns (1 mark).
14		**Create a model of CG according to the different committees of CG in India**. Overview of Corporate Governance committees in India (2 marks). Key responsibilities and functions of each committee (3 marks). Integration of committees for comprehensive governance (2 marks). Examples illustrating successful governance through committees (1 mark).
15		**Integrate the legal aspects of CG based on the different Acts.** Overview of key Corporate Governance Acts in India (2 marks). Legal obligations and compliance requirements (3 marks). Evaluation of the impact of legal aspects on corporate governance (2 marks). Recommendations for ensuring effective legal compliance (1 mark).
16		**Compare and contrast the different views of Business Ethics.** Overview of major perspectives on Business Ethics (2 marks). Identification of commonalities and differences (3 marks). Critical analysis of strengths and weaknesses (2 marks). Practical implications for businesses based on different views (1 mark).
	PART D (Compulsory Question)	

| 17 | | Case Study
Introduction (2 Marks):
Briefly introduce the chosen case (Enron, WorldCom, AIG, etc.).
Sub-question 1 (3 Marks):
Analyse the major ethical and governance issues leading to the downfall.
Sub-question 2 (3 Marks):
Discuss the lessons that organizations can learn from this case in terms of governance and ethics.
Overall Assessment (2 Marks):
Evaluate the overall quality of the responses, coherence, and relevance to the case study. |

SET 1

UNIVERSITY OF CALICUT
…….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3C 017
Course Name: Strategic Management

Max. Marks: 60		Duration: 3 Hours

PART A

	Answer all questions, each carries 2 marks.	Marks
1	Explain SWOT Analysis	(2)
2	What are the 4 types of strategic analysis?	(2)
3	Describe the role of Vision in an organization.	(2)
4	Elaborate on the role of PESTEL analysis?	(2)
5	What is strategic audit?	(2)

PART B
Answer any FOUR questions from this section. Each question carries 4 marks.

6	Illustrate the characteristics of a good mission statement with an example.	(4)
7	Differentiate between BCG matrix and GE nine cell matrix	(4)
8	Distinguish between Planned vs. Emergent Strategy	(4)
9	Compare Red Ocean Vs. Blue Ocean Strategy.	(4)
10	Outline the key differences between Strategic Control and Operational	(4)
11	What are the pros and cons in using the Du Pont analysis?	(4)

PART C
Answer any THREE questions from this section. Each question carries 8 marks

12	Explain the major tasks of strategic leaders in organizations with examples of recent strategies in telecom, two-wheeler and aviation industries.	(8)
13	Define strategic leadership and describe top-level managers' importance as a resource.	(8)
14	Discuss the factors in internal environment of an organization for strategy formulation.	(8)
15	Discuss the advantages and disadvantages of diversification and explain the different types.	(8)
16	Discuss the importance of corporate culture in implementing strategy.	(8)

PART D (Compulsory Question)

17	Discuss and evaluate any four strategic decisions related to international entry methods with an example.	(10)

SET 1	
Scheme of Valuation/Answer Key	
(Scheme of evaluation (marks in brackets) and answers of problems/key)	
UNIVERSITY OF CALICUT	
…….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR	
Course Code: BUS 3C 017	
Course Name: Strategic Management	

Max. Marks: 60		Duration: 3 Hours

PART A			
	Answer all questions, each carries 2 marks.		Marks
1		SWOT- Strengths, Weaknesses, Opportunities, and Threats. Technique for assessing four aspects of business	(2)
2		Business strategy, Operational strategy, Transformational strategy, Functional strategy.	(2)
3		Describes what the organization will become in the future. Broad and inspirational statement intended to engender support from stakeholders.	(2)
4		PESTLE analysis provides contextual information about business direction, brand positioning, growth targets, and risks to productivity.	(2)
5		Strategic audit is an objective review and evaluation of a strategic plan been put into motion by senior leaders and key stakeholders to meet an organization's future objective.	(2)
PART B			
	Answer any FOUR questions from this section. Each question carries 4 marks.		
6		Nature of business, Core Competencies, Distinctive Benefits, Desired Results, Short, Believable, Relevant	(4)
7		BCG Matrix uses market growth rate and relative market share as parameters, GE 9-Cell Matrix uses industry attractiveness and business unit strengths as its dimensions. The GE 9-Cell Matrix, has nine cells, offers a finer resolution compared to the four-cell BCG Matrix.	(4)
8		Emergent change is quick to respond to industry drivers such as markets, customer preferences, technology, risk factors and competition. Planned change allows for rigorous strategic planning, architecture, design, project management and risk management processes.	(4)
9		Red Ocean strategy emphasizes competition and gradual improvements while taking on established competitors in a well-known market. Blue Ocean strategy stimulates businesses to venture into uncharted territory, establishing new markets through creative thinking and originality.	(4)
10		Operational Control views success as ensuring that the actions required by a process are executed as planned. Strategic Control views success in terms of the consequences of the actions taken.	(4)
11		DuPont analysis considers three important performance elements: profit margin, operational efficiency, and financial leverage. DuPont analysis utilizes data from a company's income statement and balance sheet, some of which may not be entirely accurate.	(4)
PART C			
	Answer any THREE questions from this section. Each question carries 8 marks		
12		The main objectives of strategic leadership are to streamline processes, boost strategic productivity, promote innovation and cultivate an environment that encourages employees to be productive, independent and to push forward their own ideas.	(10)
13		Strategic leadership consists of the top-level executives responsible for the broad, long-term strategic direction of an organization.	(10)
14		Internal factors include values, mission/objectives, organizational structure, culture and management style, Human Resources, labor unions, and physical and technological resources.	(10)
15		Diversification can help revenue, reduce dependence on a single source of income, and create a competitive advantage. Types of diversification are Horizontal diversification, Concentric diversification, Conglomerate diversification, Conglomerate diversification, Vertical diversification.	(10)

16		Corporate culture represents the professional values a company adopts that dictate how it interacts with employees, vendors, partners and clients. Corporate culture is a driving force in how the company does business, it has an impact on developing business strategy.	(10)
		PART D (Compulsory Question)	
17		1. Technical innovation strategy 2. Product adaptation strategy 3. Availability and security strategy 4. Low price strategy 5. Total adaptation and conformity strategy	(10)

SET 1

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.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR</td></tr>
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UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4C 019

Course Name: Entrepreneurship

Max. Marks: 60			Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Define entrepreneurship and provide two key attributes of a successful entrepreneur.	(2)
2		Define Economic Entrepreneurship Theory	(2)
3		What do you understand by a start-up?	(2)
4		List out the methods of financing a project	(2)
5		Define Design Thinking	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Explain the different functions of an entrepreneur	(4)
7		Discuss the types of innovation with examples	(4)
8		What is the need for conducting EDPs?	(4)
9		Explain about social cost-benefit analysis of a project	(4)
10		Discuss the stages involved in a typical Design Thinking process	(4)
11		What are the common errors in project formulation? Explain.	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Give a short note on Women Entrepreneurship	(8)
13		Explore the role of psychological factors in entrepreneurship. Discuss how psychological traits and behaviours influence the decision-making process of entrepreneurs.	(8)
14		Explain the role of SIDBI in promoting of MSME.	(8)
15		Explore the different ownership structures for businesses	(8)
16		Compare and contrast ideation tools such as brainstorming and innovation heuristics	(8)

PART D (Compulsory Question, 10 marks)

17		EduTechHub is a comprehensive educational technology platform designed to revolutionize learning experiences for students of all ages. The platform aims to provide accessible and engaging educational resources, personalized learning paths, and a collaborative environment for students, educators, and parents. Write a detailed project report for your venture.	(10)

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)

		UNIVERSITY OF CALICUT	
		.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR	
		Course Code: BUS 4C 019	
		Course Name: Entrepreneurship	
Max. Marks: 60			Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Peter F. Drucker: Entrepreneurs are people who look for change, respond to it, and use it as an opportunity. Innovation is the tool entrepreneurs use to exploit changes as an opportunity for a different business or service. Key attributes – discipline, curiosity, creativity, willingness to try things, honesty, always have a plan, understanding the value of self care, taking risks *(Definition – 1 mark, any two attributes – 1 mark)*	(2)
2		Economic Theory – According to this theory, an entrepreneur executes all activities due to economic incentives. The main aim of this theory is profit motive.	(2)
3		According to Forbes, startups are businesses that want to change the world and disrupt industries at scale. Startups are often at high risk of failure due to a lack of resources and ambiguities in the business model.	(2)
4		Term loan, Deferred payment guarantee, soft loan, suppliers line of credit, buyers credit, debentures, leasing, public deposits, equity, preference share, retained earning, unsecured loans, seed capital, government subsidies	(2)
5		Design thinking can be useful when tackling problems that are ill-defined or unknown. It can help us observe and develop empathy with the target users. It can also enhance our ability to question: in design thinking you question the problem, the assumptions and the implications.	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Innovation, assumption of risk, research, development of management skills, overcoming resistance to change, catalyst of economic development *(1 mark each)*	(4)
7		Incremental innovation - Incremental innovation, also known as continuous improvement, refers to improving a product or service that already exists. Breakthrough innovation Disruptive innovation Basic research-Basic research refers to the discovery of a new phenomenon that enables new problem solving techniques. *(each innovation – 1 marks)*	(4)
8		Creation of employment opportunities, capital formation, Balanced regional development, use of local resources, improvement in per capital income, improvement in standard of living, economic independence, preventing industrial slums, reducing social tension, facilitating overall development, helps in searching and exploiting opportunities, enhancing managerial abilities.	(4)
9		Social cost-benefit analysis is a systematic and cohesive method to survey all the impacts caused by a development project. It comprises not just the financial effects (investment costs, direct benefits like tax and fees, et cetera), but all the social effects, like: pollution, safety, indirect (labour) market, leg. al aspects, et cetera	(4)

1 0		Empathize, Define, Ideate, Prototype, Test	(4)
1 1		Wrong product selection, capacity utilization estimates, market study, Technology selection, location selection, selection of ownership firm	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
1 2		Opportunities – diversity and innovation, social impact, job creation *(3 marks)* Disadvantages – access to capital, societal expectations, networking and mentorship *(3 marks)* Other points - government initiatives and support *(2 marks)*	(8)
1 3		Passion, need for achievement, resilience , personality traits, tolerance for ambiguity, willingness to learn, mental toughness. *(each relevant point with explanation – 2 marks)*	(8)
1 4		Initiates steps for technology adoption, exchange, upgradation and modernisation of existing units. Participates in the equity type of loans on soft terms, facilitates timely flow of credit for both term loans and working capital to SSI. Enlarges marketing capabilities of the products of SSI s in both domestic and international markets. Promotes employment oriented industries especially in semi urban areas to create more employment *(each relevant point with explanation – 2 marks)*	(8)
1 5		Sole proprietorship , partnership , Public limited company, private limited company, LLP etc *(each relevant point with explanation – 2 marks)*	(8)
1 6		In the Ideation stage, design thinkers spark off ideas — in the form of questions and solutions — through creative and curious activities such as Brainstorms and Worst Possible Idea. At its most basic level, a Brainstorm session involves sprouting related points from a central idea. Brainstorming is one of the primary methods employed during the Ideation stage of a typical Design Thinking process. Brainstorming is a great way to generate many ideas by leveraging the collective thinking of the group, engaging with each other, listening, and building on other ideas. In the ideation process of design thinking, innovation heuristics are guiding principles or strategies that can help teams generate creative and novel ideas. These heuristics encourage a mindset that fosters innovation and divergent thinking. Here are some innovation heuristics commonly used in the ideation phase of design thinking- think outside the box, empathize with users, cross-pollination, divergent and convergent thinking, prototyping, mind mapping, role playing etc .. *(ideation – 2 marks, brainstorming – 3 marks, innovation heuristics – 3 mark)*	(8)
		PART D (Compulsory Question)	
1 7		Introduction page, Executive summary, Industry analysis, Description of venture, production plan, Marketing plan, organizational plan, assessment of risk, financial plan, appendix (*one step - 2 marks can be given*)	(10)

<div align="center">**SPECIALISATION FINANCE**</div>

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 3	BUS 3EF 01	SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT	3	Elective - Finance

Introduction: This course aims to teach the fundamentals of investment and the strategies to become a successful investor. It covers the techniques to value securities and how to assess the performance of securities and portfolio. It discusses the risk return trade-off for an investor, and the strategies that can be used to diversify the risk. It also throws light on how securities are evaluated based on Fundamental and Technical analysis. It also discusses the various theories for an efficient portfolio management.

Course Objectives:

This course aims to equip students with the knowledge and skills required to construct and manage investment portfolios effectively. Participants will learn diversification strategies, risk management techniques, and portfolio optimization methods to create well-balanced and diversified investment portfolios.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Describe the relevance of investment, the alternatives available, and the financial market functionalities and components.
2	L4	Analyze the value of securities and the risk-return relationship of securities and portfolio
3	L3	Apply financial and technical analysis to create an optimal portfolio
4	L5	Evaluate the performance of various portfolios using appropriate models

CO – PO Mapping:

By the end of the course, the student will achieve the following course outcomes.

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	1	0	0	0
2	2	3	0	0	0
3	2	3	0	0	0
4	2	3	0	0	0

Module	Syllabus	Hours allotted
1	**Investment Overview and Financial Markets:** Basics of Investment- Investment-Speculation and Gambling - types of investment – investment avenues— Securities Market; Primary market and Secondary Market- Stock exchanges; functions of stock exchanges; trading and operational mechanism of stock exchanges; Listing of securities- Trading system in stock exchanges..	**9**
2	**Risk & Return Analysis:** Concepts of risk and return –Measuring historical and expected (ex-ante) return, Elements of Risk- Systematic and Unsystematic risk; Measurement of Risk (Problems), Measurement of Systematic Risk- Value at Risk (VaR)- diversification of risk.	**9**
3	**Security analysis:** Fundamental analysis: EIC Framework- Economy Analysis, Industry Analysis and Company analysis: Equity valuation - Constant Growth Modal - Dividend capitalization - Earnings capitalization, Sharpe's single index model; Capital Asset Pricing Model (CAPM) Technical analysis: Meaning of technical analysis; Basic principles of technical analysis; Dow Theory; chart patterns; Elliot wave theory; mathematical and technical indicators: EMA, ROC, RSI and MACD (theory only); Market Indicators: Breadth of the market and Odd-lot i Efficient Market Hypothesis**:** Random Walk theory- Forms of Market Efficiency. .	**9**
4	**Portfolio Management**: Steps- Portfolio Analysis- Measurement of Risk and return of a portfolio- Reduction of portfolio risk through diversification. Portfolio Selection: Feasible set of Portfolio-Optimal Portfolio- Markowitz's Efficient frontier theorem, Single index Model- Capital Asset Pricing Model (CAPM)- Arbitrage Pricing Theory- (Problems)	**9**
5	**Portfolio Revision & Evaluation:** Need for Revision- Portfolio revision strategies Portfolio Evaluation –Need for Evaluation- Methods of evaluation of a portfolio- Sharpe's Performance Index – Treynor's Performance Index – Jensen's Performance Index.(Problems)	**9**

	Total	**45**

(60% Problem and 40% Theory)
References:

- ➢ Chandra, P. Investment Analysis & Portfolio Management. Tata McGraw Hill
- ➢ M. Ranganathan and R. Madhumathi. Investment Analysis and Portfolio Management. New Delhi. Pearson Education Press
- ➢ V. A. Avadhani. Security Analysis and Portfolio Management (7th ed.). New Delhi. Himalaya Publication.
- ➢ Reilly and Brown. Investment Analysis and Portfolio Management. Cengage Learning, India
- ➢ Fisher, D.E. and Jordan, R.J. Security Analysis and Portfolio Management (6th ed.) Prentice Hall

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 3	BUS 3EF 02	**STRATEGIC COST MANAGEMENT**	3	**Elective - Finance**

Introduction:

Cost management is a fundamental aspect of financial decision-making within organizations, and in today's rapidly evolving business landscape, it has never been more crucial to master advanced cost management strategies. This course is designed to build upon your foundational knowledge of cost accounting.

Course Objectives:

The course aims to develop an in-depth understanding of advanced cost management techniques used in business decision-making & equip the participants with the practical application of costing used in manufacturing & service sectors and world class manufacturing companies for Cost control and cost reduction

Course Outcomes:

By the end of the course, the student will be able to
:

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Define and explain the basic concepts of cost accounting and management including material costing, process costing, budgetary control, and activity-based costing
2	L4	Analyse the applications of marginal costing.

3	L3	Apply various cost management methods to solve real-life cost management problems (or case studies) of the companies.
4	L5	Evaluate the cost management practices of various manufacturing firms and to make recommendations for applying better practices of cost management practices.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	1	0	0	0
2	0	3	0	1	0
3	0	2	0	3	0
4	0	2	0	3	0

Module	Syllabus	Hours allotted
1	**Cost Concepts and Cost sheet**: Basic terminologies used in cost Accounting- Classification of Costs-Element wise - Functional wise- Behavioural wise - Mangerial decision making classification- Mangerial Accounting v/s Cost Accounting - Techniques & Methods of Costing - Techniques used for separation of semi -variable costs, cost sheet .	9
2	**Marginal v/s Absorption Costing in Decision making:** Definition and Meaning of Marginal Cost & Marginal Costing - Features of marginal costing- Formulas used in Marginal Costing- Absorption Costing v/s Marginal Costing - Application of Marginal Costing in decision making, Break Even and CVP Analysis. .	9
3	**Cost application in Manufacturing & Service Sectors**: Service Cost Units-Service Cost Analysis-Operating Cost Statement- Transport, Hotel & Hospital services- **Process Costing**- Equivalent Production, **Joint Product and By Product costing.**	9
4	**Cost application in world-class manufacturing companies** - **Activity Based Costing**: Difference between traditional costing system & the application of ABC- steps in ABC – creation of homogeneous Cost pools & Cost Drivers – implementation of ABC	9
5	**Cost control and Cost reduction techniques**: N eed and Importance- Methods and techniques of cost control and reduction- Value Analysis and Engineering- Target Costing- Kaizen Costing-Six sigma- ERP- Bench marking- Life cycle costing- Theory of constraints - Strategic Cost Management.	9
	Total Hours	45

(60% Problem and 40% Theory)

References:

- Charles T. Horngren, Srikant M. Datar and Madhav V. Rajan. Cost Accounting: A Managerial Emphasis. Pearson (14th ed.)
- Ray H. Garrison and Eric W. Noreen. Managerial Accounting. Mcgraw Hill Education (14th ed.)
- Michael W. Maher and Clyde P. Stickney. Cost Accounting: Principles and Practices. Thomson South-Western.
- Don R. Hansen and Maryanne M. Mowen. Contemporary Cost Management. South-Western College Pub.
- Ronald W. Hilton and Michael W. Maher. Cost Management: Strategies for Business Decisions. Mcgraw Hill Education.
- Michael R. Kinney, Cecily A. Raiborn and Jesse T. Barfield. Cost Accounting: Foundations and Evolutions. Cengage (9th ed.)

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 3	BUS 3EF 03	**BANKING AND INSURANCE**	3	Elective - Finance

Introduction: Banking systems and processes have undergone a paradigm change during the last couple of decades. With the ever-increasing economic pressures, banking has assumed paramount importance. The principal objective of this course is to introduce the recent changes and developments in the banking processes and their impact on various stakeholders.

Course Objectives:

The primary objective of the Principles and Practices of Banking course is to provide participants with a solid foundation in the fundamental principles and concepts of banking. Students will learn about the core functions of banks, banking regulations, and the role of financial institutions in the economy.

Course Outcomes:

By the end of the course, the student will be able to
.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Discuss the key terms, terminologies, laws, concepts, and theories pertaining to the study of banking
2	L2	Explain the various dimensions of special and general relationship between a banker and the customer.
3	L3	Demonstrate the operational aspects of NRI Business and Foreign Currency management in Indian banks.
4	L4	Analyze the ancillary services and digital innovation in India and the role of technology in contemporary banking practices.
5	L5	Critically appraise the Credit Facilities provided by the banks and the Government Sponsored Schemes.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	1	0
2	1	0	0	1	0
3	3	0	0	2	0
4	2	0	0	3	0
5	2	0	0	3	0

Module	Syllabus	Hours allotted
1	**Introduction to Banking and Customer Relations**: Banking Systems – Definitions – Functions – Types – Central Banking – Structure of Banking System– Loans and Advances – Assets and Liabilities Management (ALM) – Endorsement and Crossing of Cheques – Payment of Cheques – Collection of Cheques. Indian Banking Structure - Guidelines on Para Banking & Financial Services provided by Banks- Reforms & Developments in the Banking sector- Banker-Customer Relationship- AML- KYC Guidelines- Operational Aspects of KYC- Opening Accounts of Various Types of Customers- Operational Aspects of Deposit Accounts- Banker's Special Relationship- Customer Service Guidelines- Duties & Rights of a Banker and Customer Rights- Grievance Redressal & RBI Integrated Ombudsman Scheme 2021	9
2	**Lending and Credit Management** : Principles of Lending- Different Types of Borrowers, and Types of Credit Facilities- Appraisal and Assessment of Credit Facilities- Operational Aspects of Loan Accounts- Types of Collaterals and Their Characteristics- Different Modes of Charging Securities- Documentation- Non-Performing Assets/ Stressed Assets- Important Laws Relating to Recovery Of Dues- Contracts of Indemnity, Guarantee & Bank Guarantee- Letters of Credit, Deferred Payment Guarantee, and Bill Finance- Credit Cards, Home Loans, Personal Loans, Consumer Loans- Priority Sector Advances, Agricultural Finance, and Government Sponsored Schemes	9
3	**Banking Operations and Foreign Exchange**: Operational Aspects of Handling Clearing/Collection/Cash- Foreign Exchange Remittance Facilities for Individuals- Operational Aspects of NRI Business- Foreign Currency Accounts for Residents and Other Aspects- Payment and Collection of Cheques and Other Negotiable Instruments- Responsibility of Paying Bank and Collecting Bank- Ancillary Services	9

| 4 | **Banking Technology and Digital Innovations**: Essentials of Bank Computerisation- Operational Aspects of CBS Environment- Alternate Delivery Channels – Digital Banking- Data Communication Network and EFT Systems- Digital Payment Systems – NPCI- Impact of Technology Adoption and Trends in Banking Technology- Security Considerations and Mitigation | 9 |

	Measures in Banks- Operational Aspects of Cyber Crimes/Fraud Risk Management in Cyber Tech- Technology trends in Banking, e-RUPI, Fintech - RegTech, SupTech, Hashtag banking, etc.- Role of AI and Technology in Retail Banking	
5	**Insurance:** Foundations of Risk Management and Insurance- Introduction to Risk Management Insurance - Overview of risk and insurance concepts - Types of insurance and their significance - Principles of risk management - Risk Assessment and Analysis - Quantitative and qualitative risk assessment techniques - Risk identification and evaluation - Risk appetite and tolerance- Insurance Contracts and Policy Analysis- Key components of insurance contracts - Underwriting and policy issuance - Policy analysis and coverage evaluation.	9
	Total	45

(100% Theory)

References: References:

- IIBF. Principles and Practices of Banking.McMillian Publishers (2nd ed.)
- N.K. Gupta. Principles & Practices of Banking (IIBF - JAIIB)
- Paul, Suresh. Management of Banking and Financial Services. Pearson (2nd ed.)
- Berry, Leonard L., Donnelly, Jr, James H. Marketing for Bankers. American Institute of Banking, American Bankers Association, 1975
- Agarwal O.P. Practices & Law of Banking CAIIB-Guide, Skylark Publications
- George E. Rejda and Michael McNamara. Principles of Risk Management and Insurance. Pearson

- Patodiya, S.N. Bank Marketing Management, Macmillan Publishers Ltd.,1984
- Kaptan, S.S. and Choubey, N.S. Indian Banking in Electronic Era, Sarup & Sons, NewDelhi,2003

- John C. Hull . Risk Management and Financial Institutions. Wiley

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 3	BUS 3EF 04	**FORENSIC ACCOUNTING**	3	Elective - Finance

Introduction:

Forensic accounting is a multidisciplinary field that combines accounting, auditing, investigative skills, and legal knowledge to identify and prevent financial fraud, misconduct, and mismanagement. In a time where financial crimes and corporate scandals are on the rise, the role of forensic accountants has become more critical than ever.

Course Objectives:

The course will help the students to develop expertise in financial investigation, understand legal and ethical aspects of forensic accounting and apply forensic accounting techniques to real-world cases.

Course Outcomes:
By the end of the course, the student will be able to

.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Describe the fundamental concepts of fraud and forensic accounting that may help ethical decision-making.
2	L4	Analyse the intricacies of financial statement fraud, including its relationship with accounting principles which will lead to critical thinking and problem-solving skills.
3	L3	Illustrate the principles and techniques of forensic accounting to investigate financial irregularities effectively to lead and collaborate with investigative teams
4	L5	Evaluate a wide array of forensic audit techniques to identify irregularities, and solve intricate financial problems
5	L2	Discuss the key legal aspects related to laws in India which crucial for ethical decision-making and compliance in various business contexts.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	1	0	0
2	0	3	2	0	0
3	0	2	0	0	3
4	0	3	3	0	0
5	1	0	0	3	0

Module	Syllabus	Hours allotted
1	**Introduction to Forensic Accounting:** Introduction to fraud and forensic accounting: Definition of fraud, fraud principles- fraud triangle, fraud diamond, fraud pentagon, fraud scale, fraud circle, Hollinger Clark Theory. Types of frauds-Banks, Corporates, lnsurance, Cyber, Consumer. Forensic accounting -scope, forensic accountant, forensic auditor. Detecting red flags.	**9**
2	**Financial Reporting Fraud:** Financial Statement Fraud, Accounting Principles and Fraud, Different types of financial statement frauds-Fictitious revenues, Fabricating revenue, inadequate provisions for sales and returns, Sales with conditions. Detection of Financial statement fraud, Deterrence of financial statement fraud.	**9**
3	**Process and Techniques of Forensic Accounting:** Process of Forensic Accounting, Interviewing Skills and techniques- Overview of an effective interview, interview process, Signs of deception, Barriers to effective interviews.	**9**
4	**Forensic Auditing:** Forensic audit techniques- General audit techniques, Statistical & Mathematical techniques, Digital Forensics, Computer Assisted Auditing Techniques, Generalized Audit Software, Common Software Tools, Data mining techniques, Laboratory Analysis of Physical and Electronic Evidence. Forensic audit report, Cybercrime.	**9**
5	**Regulatory Framework:**	**9**

	Laws in lndia: Distinction between Civil and criminal justice systems, individual rights during lnvestigation-Legal perspective, The Information Technology Act, 2000, Amended 2008, lndian penal code 1860, Civil Procedure Code 1908, lndian Contract Act, 1872, lndian Evidence Act, 1872, The Prevention of Money Laundering Act, 2002, The Foreign Exchange Management Act, 1999, The Companies Act, 2013; Framework on Fraud Deterrence and post-event punishment, Fraud Prevention, Organizations to Combat Fraud in India and Abroad	
	Total	**45**

(100% Theory)

References:

- Kranacher M.J, & Riley R. Forensic Accounting and Fraud Examination. John Wiley and Sons, New Jersey
- Silverstone H, Sheetz. M, Pedneault S. Forensic Accounting and fraud investigation for non-experts. Hoboken NJ, Wiley.
- Petrucelli, J. R. Detecting fraud in organizations: Techniques, tools, and resources. John Wiley & Sons, NewJersey
- Rezaee, Z. Forensic Accounting and Financial Statement Fraud. Business Exped Press. New York
- Greg Shields. Forensic Accounting: What the World's Best Forensic Accountants Know. Createspace Independent Publishing Platform.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 3	**BUS 3EB 05**	**FINANCIAL ANALYTICS**	**3**	**Elective - Business Analytics**

Introduction:

Financial Analytics is a comprehensive and pivotal course within the realm of modern finance, designed to equip students with a profound understanding of the quantitative techniques and analytical tools essential for making informed financial decisions. This course delves into the intricate world of financial data analysis, risk management, and investment strategies, providing students with the skills and knowledge necessary to navigate the complexities of contemporary financial markets. With a focus on empirical analysis and the application of statistical methods, Financial Analytics empowers individuals to evaluate, forecast, and optimize financial outcomes, fostering a critical skill set highly sought after in today's competitive financial landscape.

Course Objectives:

The objectives of the course "Financial Analytics" are as follows:

- Comprehensive Understanding: To provide students with a comprehensive understanding of financial analytics, encompassing key principles, methodologies, and techniques in the field.
- Quantitative Competence: To develop students' quantitative and analytical skills, enabling them to interpret and analyze financial data effectively.
- Risk Assessment: To equip students with the ability to assess and manage financial risks through the application of statistical tools and models.
- Investment Decision-Making: To enable students to make informed investment decisions based on data-driven insights, considering factors such as portfolio optimization and asset allocation.
- Financial Modeling: To introduce students to financial modeling techniques, enabling them to construct and evaluate financial models for various scenarios.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome

1	L2	Comprehend the fundamental principles and concepts of financial analytics, including financial data sources, statement analysis, and risk management

			Hours
2	L3	Apply financial analytics techniques to analyse real-world financial data, conduct financial statement analysis, and make informed business decisions based on the results.	
3	L4	Analyze complex financial scenarios by employing advanced financial modelling and forecasting techniques, and critically evaluate the outcomes to provide insights for strategic financial planning.	
4	L5	Create innovative financial analytics solutions to solve financial challenges, and critically evaluating the effectiveness of these solutions in real-world financial contexts.	

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	2	3	0	0	0
2	0	3	0	2	0
3	2	3	0	0	0
4	0	3	0	2	0

Module	Syllabus	Hours allotted
1	**Introduction to Financial Analytics:** Definition, its importance in digital age; The importance and application in business; Types of financial analytics; Financial data sources, collection and tools; Data cleaning and preparation; Exploratory data analysis; Financial modelling and forecasting; Case studies	9
2	**Financial Statement Analysis:** Types and tools of financial statement analysis, its importance in business decision-making; Common-size statements; Comparative statement analysis; Financial Ratios: types, interpretation, Du Pont analysis; Trend analysis; Fund Flow statement analysis; Cash flow analysis: types, interpretation; Case studies	9
3	**Financial Markets & Risk Management Analytics:** Markets: Equity markets, Bond markets, Derivative markets; Analysis: Technical analysis, Fundamental analysis; Types of risk: Financial risk, Market risk, Credit risk, Operational risk; Risk assessment, Risk management strategies; Quantitative risk analysis; Value at risk (VaR); Credit risk analysis; Financial analytics for investment decisions, credit scoring, fraud detection, and regulatory compliance; Case studies	9

4	**Financial Forecasting and Modelling:** Time series analysis; Regression analysis; Financial forecasting models; Introduction to financial modelling; Types of financial models; Building a financial model; Case studies	9
5	**Machine Learning for Financial Analytics:** Introduction to machine learning; Supervised learning, and Unsupervised learning; Machine learning algorithms; Text mining; Case studies	9
	Total	**45**

(50% Theory and 50% Problems)

References:

- o DePamphilis, D. Financial analytics for dummies. Hoboken, NJ: Wiley.
- o Inmon, W. H. Financial analytics: A new generation of tools and techniques for solving real-world problems. Indianapolis, IN: Wiley.
- o Lopez de Prado, M. Machine learning for finance. Hoboken, NJ: Wiley.
- o Makridakis, S., Wheelwright, S. C., & Hyndman, R. J. Financial forecasting: Theory and practice. Hoboken, NJ: Wiley.
- o Penman, S. H. Financial analytics: Methods and applications. Cambridge, MA: MIT Press.
- o Sanvito, S. Deep learning for finance: Theory and practice. Cambridge, UK: Cambridge University Press

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
3	BUS 3EF 06	**PROJECT FINANCE**	3	**Elective - Finance**

Introduction

This course helps you to explore the principles, tools, and strategies essential for funding and managing projects efficiently. From risk assessment to financial modeling, the students can gain the expertise needed to navigate the complexities of project finance and drive successful outcomes.

Course Objectives

- To provide students with an understanding of the commercial, financial, and socio-economic aspects of a project.

- To prepare a detailed project report and business plan.

- To understand the evaluation of Project Techno-Economic feasibility and KPIs

Course Outcomes

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels	Course Outcome
1	L2	Prepare a detailed project report and business plan
2	L3	Do project risk analysis
3	L4	Take capital budgeting decision
4	L5	Create financial models for projects and Business valuations of the same

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	3	0
2	3	3	0	0	0
3	2	3	0	0	0
4	0	3	0	2	0

Module	Syllabus	Hours allotted
I	**Project appraisal**: Project: Definition, characteristics, types, Appraisal: Marketing, Technical, Political, Financial, Social, Project Identification, Project Preparation, Pre-feasibility study, Feasibility study, Preparation of detailed project report. Licensing/clearances: type of licenses, clearances involved, Procedure, and documentation required for getting a license in India.	9
II	**Financial Analysis**: Estimation of cost of project & Means of financing, Arrangement of Funds, Traditional sources of financing: Equity shares, preference shares, Debentures/bonds, loan from Financial 3institutions, Alternative sources of fi4nancing: FDI & FII, Private Equity, Se5curitization, Venture Capital, Different business/project support government schemes in India, Government funding for projects, Startup schemes of government, Projected cash flows of project, Appraisal Criteria, NPV, IRR, PI, PBP, ARR, preparation of business plan.	9
III	**Techno-Economic Clearance**: Understand the concept of Technical feasibility and Techno-economic feasibility Social Cost Benefit Analysis: Rationale, UNIDO, Little and Merrilee's Approach, Public-Private Partnerships (PPP): Forms, Guidelines, Problems and Issues.	9
IV	**Project Risk Analysis**: Types of risk, External stakeholders-related risks: customers, consumers, suppliers, Internal risks: project team members, top management, Project-related risks: technological or logistic risks, Event-related risks: economic (e.g. financial crisis), sociopolitical, Simple estimation of risk: Sensitivity Analysis, Monte Carlo Simulation, Decision Tree Analysis, Project audit.	9
V	**Financial Valuation**: Describe the key aspects of financial analysis and valuation to effectively manage different types of enterprises. Critical thinking skills in the application of techniques in financial analysis and valuation. Gather, categorize, analyze, interpret, and evaluate relevant qualitative and quantitative information and develop the ability to be creative and innovative through the completion of a final valuation project. Mini Project: Valuation of a firm on real grounds and submit financial analysis and valuation report	9
	Total	**45**

References:

➢ P. Chandra. Projects - Planning, Analysis, Selection, Financing, Implementation and Review McGraw-Hill

➢ H R Machiraju. Introduction to Project Finance: An Analytical Perspective,

➢ Maylor. Project Management. Pearson

➢ Jeffrey K. Pinto. Project Management. Best For project planning and management.

➢ K.Nagarajan. Project Management. New Age International Publisher

➢ Sheridan Titman, John D. Martin. Valuation: The Art and Science of Corporate Investment Decisions. Prentice Hall Copyright

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 4	BUS 4EF 07	BEHAVIOURAL FINANCE	3	Elective - Finance

Introduction:

This course delves into the multifaceted aspects of Behavioural Finance, offering a unique perspective on why people make the financial choices they do. The course explores the cognitive biases, emotional triggers, and psychological factors that can lead individuals and institutions to make decisions that deviate from rational, textbook financial theories. By doing so, the students can gain valuable insights into market anomalies, bubbles, crashes, and the underlying forces that drive asset prices.

Course Objectives:

The primary objective of this Behavioural Finance course is to help participants develop a deep understanding of the various behavioural biases that influence financial decision-making. This course aims to equip participants with practical knowledge and skills to apply Behavioural Finance concepts in investment strategies.

Course Outcomes:
By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Describe the history and evolution of Behavioral Finance to understand modern financial theory and how they are currently being applied in real-world scenarios.
2	L3	Examine the cognitive processes, biases, and decision-making theories, to apply this knowledge to make informed decisions in complex business environments.
3	L4	Synthesize complex concepts related to the psychology of investor behavior, behavioral finance theories, cognitive, affective, and conative biases, and debiasing strategies to formulate comprehensive models of investor behavior.
4	L5	Demonstrate advanced proficiency in evaluating behavioral finance principles, debiasing strategies, and behavioral investing approaches to analyze and recommend evidence-based solutions for complex issues in corporate decision-making
5	L6	Strategise responses to the impact of human emotions, external influences, and neurofinance in the context of financial markets.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	2	0
2	3	0	0	2	0
3	2	0	0	3	0
4	2	3	0	0	0
5	2	3	0	0	0

Module	Syllabus	Hours allotted
1	**Introduction to Behavioural Finance:** Meaning, features and scope of behavioural finance. Practical application of Behavioural Finance: Evolution and history of Behavioural finance – Micro and Macro Behavioural Finance – Assumptions of Behavioural Finance – Standard Finance – Modern Portfolio Theory, MM Theory, Capital Asset Pricing Model (CAPM), Random Walk Hypothesis – Expected Utility Theory – Efficient Market Hypothesis – Investor Rationality and Market Efficiency.	9
2	**Behaviour and its formation Models:** Cognition, Cognitive dissonance, Cognitive bias – Emotions – Perceptions, Errors of Perception – Decision- Making – Heuristics and its relevance - Various Theories of Decision making - Personality Traits and Risk Attitudes.	9
3	**Building Blocks of Behavioural Finance:** Psychology of Investor Behaviour - Theories of Behavioural Finance – Noise Trading, Professional Arbitrage – Biases, Outcomes of biases, Various biases – Cognitive, Affective and conative Biases – Dealing with biases – Debiasing strategies – Marketing Anomalies – Prospect Theory – Models of Investor Behaviour. Elsberg's paradoxes, Rationality from an economics and evolutionary perspective. Different ways to define rationality dependence on time horizon, individual or group rationality. Herbert Simon and bounded rationality.	9
4	**Behavioural Corporate Finance:** Approaches – CEO – Overconfidence and Biases – Approaches and dealing with biases – Debiasing, Strategies – Value investing – Behavioural investing – Uses and approaches of Behavioural Finance in Corporate Decision Making. Investor behaviour: Types of investors – based on risk appetite and investment; exposure, Conformity, Contrarian investing, Social forces selfishness or altruism, Group psychology on Board, Resistance to recognizing failure, Conflict of interest. Value investing and growth investing. Stock market bubbles	9

5	**External factors and investor behaviour**: Fear & Greed in Financial Market, emotions and financial markets: geomagnetic storm, Statistical methodology for capturing the effects of external influence onto stock market returns, Contribution of Neuro finance in Behavioural Finance	**9**
	Total	**45**

(100% Theory)

References:

➢ Prasanna Chandra. Behavioural Finance, McGraw Hill, New Delhi.
➢ Bisen, Pandey. Learning Behavioural Finance, Excel Books.
➢ Sulphey.M.M. Introduction to Behavioural Finance, PHI Learning Pvt.Ltd, New Delhi
➢ Lucy F. Ackert. Understanding Behavioral Finance., Cengage Learning India
➢ Ranjit Singh. Behavioural Finance., PHI Learning Pvt.Ltd.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 4	BUS 4EF 08	STRATEGIC FINANCIAL MANAGEMENT	3	Elective - Finance

Introduction:

Strategic financial management is a multifaceted discipline that combines financial expertise with strategic thinking, planning, and decision-making. The student will learn to apply financial tools and techniques to drive strategic decision-making, optimize resource allocation, and enhance financial performance.

Course Objectives:

The primary objective of the Strategic Financial Management course is to equip participants with the knowledge and skills necessary to conduct in-depth financial analysis, assess the financial health of organizations, and make informed decisions to maximize financial performance and sustainability.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Describe the foundational concepts of Strategic Financial Management (SFM)
2	L4	Analyze the decision-making under risk and uncertainty.
3	L4	Analyze various aspects of mergers and acquisitions (M&A) including types of amalgamations, methods of takeovers, motives and strategies influencing M&A
4	L3	Apply a comprehensive set of approaches used for corporate valuation

CO – PO Mapping:

CO Number	PO1	PO2	PO3	PO4	PO5
1	3	0	0	1	0
2	0	3	0	2	0
3	0	3	0	2	0
4	0	2	0	3	0

Module	Syllabus	Hours allotted
1	**Strategic Financial Management**: An overview—Strategic Financial Management (SFM): An overview of SFM-features, scope and importance-constraints-strategic planning process-components, benefits	**9**
2	**Investments Decisions under Risk and Uncertainty**: Techniques of Investment Decision – Risk Adjusted Discount Rate, Certainty Equivalent Factor, Statistical Method, Sensitivity Analysis and Simulation Method	**9**
3	**Mergers and acquisitions:** types of amalgamations-methods of take-over – motives and strategies influencing M&A- Motives of cross boarder M&A- Categories of M&A-methods of payment in M&A – steps in merger transactions – tax benefits of merger transactions – reverse mergers – steps in reverse mergers – defensive strategies in hostile takeovers.	**9**
4	**Corporate restructuring:** Broad areas of restructuring – rationale for diversification – techniques for corporate restructuring – expansion techniques - joint ventures, business alliances, foreign franchises, intellectual property rights – Disinvestment techniques – sell off – de merger (spin off) management buyout – liquidation- leveraging buyout- other techniques – going private – share repurchase – buy-in reverse merger.	**9**
5	**Valuation of securities:** approaches to corporate valuation, valuation of equities including cash flow, dividends and earnings approach- valuation of debt – valuation of convertibles and derivatives. Black- Scholes model -valuation for mergers and acquisitions.	**9**
	Total	**45**

(60% Theory and 40% Problems)

References

➢ Girish P. Jakhotiya. Strategic Financial Management, Vikas Publishing House, New Delhi
➢ Prasad G. Godbol. Mergers, Acquisitions, Principles & Corporate restructuring, Vikas Publishing House
➢ Robert Allen Hill. Strategic Financial Management. R. A. Hill & Ventus Publishing
➢ Rajni Sofat and Preethi Hiro, Strategic Financial Management. PHI Learning

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 4	BUS 4EF 09	**INTERNATIONAL FINANCE**	3	Elective - Finance

Introduction:

International Finance, a course that delves into the complexities of financial interactions in a globalized world. In an era of interconnected economies and markets, understanding international finance is essential for anyone involved in global business, finance, or investment. This course is a gateway to comprehend the intricacies of international financial markets, exchange rates, and the various factors that influence the flow of capital and investments across borders.

Course Objectives:

The objective of this course is to develop a comprehensive understanding of exchange rates & currency markets, to help the students explore international investment and capital markets and analyze the impact of economic and political factors on international finance.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Describe the concepts related international financial markets, including foreign exchange markets, capital markets, and commodities markets.
2	L4	Analyze the factors that influence exchange rates and understand the various exchange rate systems.
3	L3	Determine and manage risks associated with international financial transactions, including currency risk, political risk, and economic risk.
4	L6	Construct international investment portfolios, considering the benefits of diversification.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	3	0

2	2	0	0	3	0
3	2	0	0	3	0
4	2	3	0	1	0

Module	Syllabus	Hours allotted
1	**International Trade**: Benefits – Basis of International Trade – Foreign Trade and Economic Growth – Balance of Trade – Balance of Payment – Current Trends in India – Barriers to International Trade – Indian EXIM Policy	12
2	**Export and Import Finance:** Special need for Finance in International Trade – INCO Terms (FOB, CIF, etc.,) – Payment Terms – Letters of Credit – Pre-Shipment and Post Shipment Finance – Fortfaiting – Deferred Payment Terms – EXIM Bank – ECGC and its schemes – Import Licensing – Financing methods for import of Capital goods.	12
3	**Foreign Exchange Markets:** Spot Prices and Forward Prices – Factors influencing Exchange rates – The effects of Exchange rates in Foreign Trade – Tools for hedging against Exchange rate variations – Forward, Futures and Currency options – FEMA – Determination of Foreign Exchange rate and Forecasting – Law of one price – PPP theory – Interest Rate Parity – Exchange rate Forecasting.	12
4	**Export Trade Documents:** Financial Documents – Bill of Exchange – Type – Commercial Documents – Proforma, Commercial, Consular, Customs, Legalized Invoice, Certificate of Origin Certificate Value, Packing List, Weight Certificate, Certificate of Analysis and Quality, Certificate of Inspection, Health certificate. Transport Documents - Bill of Lading, Airway Bill, Postal Receipt, Multimodal Transport Document. Risk Covering Document: Insurance Policy, Insurance Cover Note. Official Document: Export Declaration Forms, GR Form, PP From, COD Form, Softer Forms, Export Certification, GSPS – UPCDC Norms	12
5	**Export Promotion Schemes:** Government Organizations Promoting Exports – Export Incentives: Duty Exemption – IT Concession – Marketing Assistance – EPCG, DEPB – Advance License – Other efforts I Export Promotion – EPZ – EQU – SEZ and Export House.	12
	Total Hours	60

(80% Theory and 20% Problems)

References:

➢ Jeevanandam .C. International Business, M/s Sultan & Chand, Delhi, 2008
➢ Sumathi Varma. International Business, Ane, Delhi. 2010
➢ Eun, Cheol S. and Resnick, Bruce G.International Financial Management, Tata McGrawHill.
➢ Bekaert, Greet and Hodrick, Robert J. International Financial Management, Prentice Hall.
➢ Madura, Jeff, International Financial Management. Cengage Learning.
➢ Sharan, V., International Financial Management. PHI Learning Pvt. Ltd.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 4	BUS 4EF 10	**FINANCIAL DERIVATIVES**	3	**Elective - Finance**

Introduction:

This course is designed to provide a comprehensive understanding of financial derivatives and commodities, from the fundamentals to advanced strategies. It will encompass a wide range of topics, including futures and options, forward contracts, swaps, and the trading of various commodities.

Course Objectives:

The objectives of the course are to help the students to develop a comprehensive understanding of derivative instruments, explore trading and risk management strategies, and to analyze commodity markets and price dynamics.

Course Outcomes:
By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Explain various derivative instruments, including futures, options, swaps, and forward contracts to equip with essential financial knowledge that can be applied to real-world business scenarios
2	L3	Demonstrate different risk management strategies using financial derivatives for decision making
3	L5	Evaluate and manage investment portfolios by applying their knowledge of financial derivatives
4	L5	Evaluate the ethical considerations and regulatory framework surrounding derivative trading.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	1	0	0	0
2	2	3	0	0	0
3	0	3	0	2	0
4	1	0	0	3	0

Module	Syllabus	Hours allotted
1	**Basics of Derivatives Market**: Concept of Derivatives- Features of Derivatives – Types of Derivatives: Forwards – Futures – Options - Swaps – Commodity Derivatives - Financial Derivatives – Exchange Traded Derivatives - Over-the-counter Derivatives. Uses of Derivatives – Functions of Derivatives Market - Critiques of Derivatives - Participants in Derivatives market. Evolution of Derivatives Market - History of Derivatives in India – Regulatory Framework of Derivatives Trading in India . Global Derivatives Market.	9
2	**Forwards and Futures Market:** Forward Contract concept – Features of Forward Contract – Classification of Forward Contracts ––Pricing of Forward Contract-Cash and carry Arbitrage-Value of a forward contract - Forward Trading Mechanism- Settlement of Forward Contract. Futures Market – Futures contract – Meaning – Features of Futures contract - Futures Terminologies- Forwards Vs Futures -Types of Futures- Pricing of Futures contract – Futures Pay off. Futures Trading Mechanism in India - Margin system -Types of Margins – Operation of Margin account - Contract specifications - Trading cycle – Contract Expiry and Trading parameters- Settlement of Futures contract -Futures Trading Strategies.	9
3	**Hedging Using Futures:** Concept of Hedging – Trading and Hedging using Futures - Perfect and imperfect Hedge – Basic Long and Short Hedge – Cross Hedging – Basis Risk – Hedge Ratio – Hedge Effectiveness – Hedging using Stock Index Futures – Stock Index Futures as a Portfolio management Tool – Speculation and Stock Index Futures – Stock Index Futures Trading in Indian Stock Market.	9
4	**Options Market**: Basics of Options Market – Types of options – Option Terminologies - Option Premium – Valuation of options – Intrinsic Value and Time Value of option –Put Call parity - Moneyness of option - Basic Option Positions -Long call - Short call- Long put-Short put - Options Payoffs. Option Pricing - Determinants of Option Prices- Option Greeks – Binomial Option Pricing Model – Black-Scholes Option Pricing Model- Exotic Options.	9
5	**Option Trading Strategies and Swaps:** Options trading strategies - Naked and Covered Option – Bullish, Bearish and Neutral option trading strategies. SWAP: Concept- Features of swaps -Swap terminologies – Types of swaps – Interest Rate Swaps – Currency Swap – commodity swap- Debt-Equity Swap.	9
	Total Hours	45

(60% Theory and 40% Problems)

References:
➢ Hull, J. C, & Basu, S. Options, Futures, and Other Derivatives. Pearson India Education Services Pvt. Ltd.
➢ Gupta, S. L. Financial Derivatives - Theory Concepts and Problems. PHI Learning Private Limited
➢ Kumar, S. S. S. Financial Derivatives. PHI Learning Private Limited.
➢ Srivastava, R. Derivatives and Risk Management. Oxford University Press.

- Don M. Derivatives and Risk Management Basics, Cengage Learning, New Delhi
- Stulz M. Rene. Risk Management & Derivatives, Cengage Learning, New Delhi

Semester	Course Code	Course Title	Total Credits	Type
3	BUS 3EM 01	RETAIL MANAGEMENT	3	Elective - Marketing

Introduction:

This course delves into the intricate facets of retail, market dynamics, merchandising strategies, and leadership principles. Through theoretical frameworks and practical applications, students will emerge equipped with the intellectual prowess necessary for informed decision-making in the ever-evolving realm of retail. Welcome to a scholarly journey into the heart of retail management excellence.

Course Objectives:

The course objectives of Retail Management are designed to provide students with a comprehensive understanding of the retail industry and equip them with the knowledge and skills needed to manage retail operations effectively. The specific objectives are Retail Market and Consumer Behaviour, Retail strategy and planning, Store Location and Layout, Retail Pricing and Promotion, Merchandising etc

Course Outcomes:

By the end of the course, the student will be able to…

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Explain the basic functions, development theories and strategies of retail
2	L4	Outline the factors influencing retail shopper and customer decision-making process
3	L4	Analyse and determine the store location or Location decisions
4	L4	Determine merchandising and develop pricing strategy for retail outlets
5	L3	Apply store design aspects to decide on the exterior/interior of retail outlets.

CO – PO Mapping

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	2	0	0	0
2	2	3	0	0	0
3	2	0	0	3	0
4	3	2	0	0	0
5	3	0	3	0	0

Module	Syllabus	Hours allotted
1	**Introduction to Retailing** Significance of retail industry and Indian retail scenario and future, Retail management functions, Theories of retail development, Retail marketing mix	**9**
2	**Retail Formats and Consumers** Classification of retail stores, Understanding the Retail Consumers and the factors influencing retail shoppers, Consumer decision-making process	**9**
3	**Store Location Analysis** Store location and its importance, Types of store locations, Steps in choosing location and the factors affecting location decisions, Location analysis	**9**
4	**Retail Merchandising and Pricing** Merchandising and the process of merchandising buying, Procedure for selecting vendors and building partnerships, Concept of category management, Retail pricing and its elements and factors, Developing a pricing strategy and Adjustment to the retail price	**9**
5	**Store Design and Visual Merchandising** Store image and store design, Components of exterior and interior, Consideration for selecting layout, Visual merchandising in retail, Safety and security measures	**9**
	Total	**45**

(Case Studies to be included)

References:

- Barry Berman, Joel R Evans, Patrali Chatterjee, Ritu Srivastava. Retail Management, Pearson Education
- Michael Levy, Barton A. Weitz, Dhruv Grewal - Retailing Management, McGraw Hill
- Chetan Bajaj, Rajnish Tuli, Nidhi Varma Srivastava, Retail Management, Oxford University Press India
- David Gilbert. Retail Marketing Management, Pearson India
- K.V.S Madaan, Fundamentals of Retailing, Tata McGraw Hill
- Andrew Newman, Peter Cullen - Retailing: Environment and Operations. Cengage
- Learning EMEA.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 3	BUS 3EM 02	**CONSUMER BEHAVIOUR& MARKETING RESEARCH**	3	Elective - Marketing

Introduction:

This course delves into the intricate interplay between consumers and market forces, exploring the psychological, social, and cultural factors that shape purchasing decisions. With a focus on empirical research methodologies, students will gain a comprehensive understanding of consumer motivations, attitudes, and behaviors. As we navigate the complex landscape of contemporary markets, this course equips learners with the analytical tools necessary for effective marketing strategies. By delving into the intricacies of consumer psychology and employing rigorous research methodologies, participants will cultivate the skills essential for success in the ever-evolving field of marketing.

Course Objectives:

This course aims to impart a nuanced comprehension of Consumer Behaviour and Marketing Research through a multifaceted approach. Students will explore the psychological, social, and cultural determinants influencing consumer choices. Objectives include developing analytical skills to interpret market trends, assessing the impact of advertising on consumer perceptions, and honing the ability to design and conduct effective marketing research. Through case studies and practical applications, participants will learn to synthesize theoretical knowledge with real-world scenarios. Additionally, the course aims to foster critical thinking and strategic decision-making, empowering students to navigate the intricate landscape of consumer behavior and contribute meaningfully to the field of marketing.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L3	Critically assess consumer involvement and decision-making, demonstrating competency in understanding the information search process, evaluative criteria, and decision rules within the consumer decision-making process.
2	L4	Apply theories of personality to market segmentation, showcasing a deep comprehension of the intricate interplay between personality and consumer perception
3	L5	Evaluate core cultures and subcultures, discerning their role in shaping consumer buying behavior.

4	L6	Craft research designs and demonstrate mastery of research instruments and scales techniques.

CO – PO Mapping

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	3	0	0	0
2	3	3	0	0	0
3	2	0	0	3	0
4	3	3	0	0	0

Module	Syllabus	Hours allotted
1	**Consumer behaviour** – concepts; nature, scope and applications of consumer behaviour; Consumer behaviour and marketing strategy; profiling consumers and their needs; Market segmentation and consumer research; psychographics and life-style; Consumer behaviour audit. Consumer involvement and decision-making; Consumer decision- making process; Information search process; Evaluative criteria and decision rules	10
2	**Individual influences on buying behaviour**; Theories of personality; personality and market segmentation; consumer perception; consumer needs and motivation. Personal influences and attitude formation. Learning and consumer involvement; Communication and consumer behaviour. Reference group influence in buying decisions; opinion leadership. Family life cycle and decision- making; The buying process: problem recognition and information search behaviour; information processing; alternative evaluation; Purchase process and post purchase behaviour. Models of consumer decision-making- early models, Howard Sheth model. Recent developments in modelling consumer behaviour.	12

3	**Culture and Consumer behaviour**: Core culture and sub cultures. Role of culture in consumer buying behaviour. Profile of Indian consumers; Behavioural patterns of Indian consumers; Problems faced by Indian consumers; Consumer protection in India; Public policy and consumer behaviour.	**8**
4	**Marketing research an overview**- Need and importance- Marketing information system and marketing research- Components of MIS- Steps in Marketing Research- Problem formulation- Research design- Secondary and primary data, Research instruments- scales techniques-Data acquisition methods.	**8**
5	**Statistical summarization** – Data analysis- Tools of analysis-parametric and non-parametric tests- Report writing.	**7**
	Total	**45**

(Case Studies to be included)

References:

➢ Hawkins, Best and Coney: Consumer Behaviour, Tata McGraw Hill, New Delhi 2004.
➢ Schiffman, L.G. and Kanuk, L.L.: Consumer Behaviour, Pearson, New Delhi, 2011.
➢ Laudon, David L and Bitta Albert J Della: Consumer Behaviour, Tata McGraw Hill, New Delhi 2005.
➢ Mowen, John C: Consumer Behaviour, Macmillan, New York 1993.
➢ Assael, H: Consumer Behaviour and Marketing Action, South Western, Ohio 1995.
➢ David Luck and Ronald Rubin: marketing Research PHI

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
3	BUS 3EM 03	BRAND MANAGEMENT	3	Elective - Marketing

Introduction

This course delves into the theoretical foundations and practical applications of brand strategy, equity, and communication. Through a rigorous exploration of market dynamics, consumer behavior, and case studies, students will gain a deep understanding of the academic principles that underpin effective brand management. By integrating strategic thinking with contemporary marketing insights, this course aims to equip scholars with the knowledge and critical skills essential for shaping and navigating the competitive landscape of brand management in today's dynamic business environment.

Course Objectives:

The course aims to build on foundational marketing concepts and provide a deeper understanding of brand management within the broader business context. This course commonly associated with Strategic Brand Leadership, Global Brand Management, Brand Portfolio Management, Brand Valuation, Innovative Branding Strategies & Brand equity.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Awareness about various concepts of brand.
2	L2	Understanding of branding strategies and brand extension decisions
3	L4	Ability to apply the brand positioning framework to develop a long term and sustainable brand
4	L3	Ability to apply the brand equity models for evaluating a brand.
5	L6	Develop and integrate marketing campaigns to reinforce or revitalise the brand

CO – PO Mapping

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	1	0
2	3	0	0	2	0
3	3	2	0	0	0
4	3	2	0	0	0

5	1	2	0	3	0

Module	Syllabus	Hours allotted
1	**Concepts of Brand:** Definition of brand, importance of branding, types of branding, Concepts of Brand awareness; Brand essence; Brand personality; Brand identity; Brand associations; brand image; Brand loyalty; Brand equity	**10**
2	**Branding strategies**: Criteria for choosing brand elements, Brand name selection, Brand extension decisions- Related extension and unrelated extension, Product vs corporate branding, Family vs individual brand names Multiple branding, Private vs national branding.	**12**
3	**Brand Positioning and Communication**: Brand positioning: Points-of-Parity and Points-of-Difference, Positioning guidelines, Brand repositioning; Indian cases on brand positioning and repositioning, Integrated Marketing Communication Programs for brand-building	**8**
4	**Measuring Brand Equity**: Need for Measuring Brand Equity, Models for evaluation of brand equity:- Brand Asset Valuation (BAV) Model, CBBE Model, Aaker's Model, BRANDZ Model.	**8**
5	**Growing and Sustaining Brand Equity**: Brand audit: Brand Inventory, Brand Exploratory, Managing Brands over time: Reinforcing & Revitalising Brands, Branding for international markets	**7**
	Total	**45**

(Case Studies to be included)

References:

- Aaker, David A. Managing Brand Equity. Free Press, New York
- Subroto Sengupta. Brand Poisoning: Strategies for Competitive Advantage. Tata McGraw Hill, Delhi 2004
- Jean-Noel Kapferer. The New Strategic Brand Management: Advanced Insights and Strategic Thinking. Kogan Page, New Delhi, 2012.
- Y.L.R. Moorthi. Brand Management. Vikas Publication House, New Delhi. 2012
- Aaker, David A. Building Strong Brands. Free Press, New York 1995
- Kevin Keller and Vanitha Swaminathan. Strategic Brand Management: Building, Measuring, and Managing Brand Equity. Global Edition; Pearson Education; New Delhi.
- S. Ramesh Kumar. Marketing and Branding: The Indian Scenario. Pearson Education, New Delhi.

➢ Jagdeep Kapoor. 24 Brand Mantras: Finding a Place in the Minds and Hearts of Consumers. Sage Publications; NewDelhi.

Semester	Course Code	Course Title	Total Credits	Type - Elective
Sem 3	BUS 3EB 04	MARKETING ANALYTICS	3	Elective – Marketing / Business Analytics

Introduction:

With a strong focus on real-world applications, the Marketing Analytics course will help the students to gain the skills and knowledge necessary to measure and enhance the effectiveness of marketing efforts, improving ROI and driving business growth.

Course Objectives:

The course on "Marketing Analytics" is designed to achieve several fundamental objectives. Firstly, it aims to equip participants with a comprehensive understanding of the principles and methodologies of marketing analytics. Through this course, individuals will develop proficiency in data collection, analysis, and interpretation, enabling them to measure and optimize marketing strategies effectively. Furthermore, it seeks to cultivate the ability to leverage analytics tools and techniques to enhance marketing decision-making, customer segmentation, and campaign performance. Ethical considerations in handling consumer data and privacy issues are also emphasized. Ultimately, this course strives to prepare marketing professionals to navigate the complex data-driven marketing landscape, empowering them to craft data-informed strategies and contribute to the overall success and competitiveness of their organizations.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Comprehend and articulate the core principles and concepts of marketing analytics for use in marketing decision-making.
2	L3	Apply data analysis techniques to effectively explore, present and interpret marketing metrics for practical decision-making.

3		L4	Analyse customer behaviour and preferences using advanced data analysis methods enabling organizations to make well- informed decisions.

4		L5	Synthesize and evaluate marketing strategies using analytics to create and optimize marketing campaigns, and to make data-driven decisions.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	2	0	0	0
2	2	3	0	0	0
3	2	3	0	0	0
4	2	3	0	0	0

Module	CONTENT	Hours Allotted
1	**Introduction to Marketing Analytics:** Definition, relevance, and importance of marketing analytics in the digital age; Marketing analytics process: Data collection and preparation for market analytics; Marketing Metrics: Key performance indicators in marketing; Metrics for measuring customer acquisition, retention, and churn; ROI calculations; Introduction to marketing analytics tools (e.g., Google Analytics, HubSpot)	9
2	**Data Analysis Techniques:** Descriptive Analytics: Data exploration and summary statistics; Data visualization techniques; Customer segmentation and profiling; Data Analysis Techniques, Classification models for customer segmentation; Time series analysis for trend prediction.	12
3	**Customer Insights and Behaviour Analysis:** Customer Lifetime Value: Understanding CLV and its importance; Calculating CLV using different methods; Using CLV for customer segmentation; Customer Journey Mapping: Customer Insights and Behaviour Analysis, Mapping the customer journey; Touchpoint analysis and customer touchpoint optimization	10
4	**Marketing Strategy and Decision-Making:** Marketing Mix Optimization: Marketing Strategy and Decision Making, Marketing Strategy and Decision Making, optimizing marketing mix strategies using data; Customer acquisition and retention Strategies: Marketing Strategy and Decision Making, Strategies for customer retention and loyalty.	8
5	**Personalisation & Ethics:** Personalization and Recommendation Systems:	

	Implementing recommendation systems; Marketing Analytics Ethics and Privacy; Ethical considerations in marketing analytics.	6
	Total	**45**

(Case Studies to be included)

References:

➢ Blanchard, O. (2011). Social Media ROI: Managing and Measuring Social Media Efforts in Your Organization. Que Publishing.
➢ Farris, P., Bendle, N. T., Rust, R. T., Quelch, J. A., & Schmittlein, D. C. (2010). Marketing Metrics: The Definitive Guide to Measuring Marketing Performance. FT Press.
➢ Hemann, C., & Burbary, K. (2012). Digital Marketing Analytics: Making sense of Consumer data in a digital world. Pearson Education.
➢ Provost, F., & Fawcett, T. (2013). Data science for business: What you need to know about data mining and data-analytic thinking. O'Reilly Media.
➢ Siegel, E. (2013). Predictive analytics: The power to predict who will click, buy, lie, or die. Wiley.
➢ Watson, R. T. (2013). Ethical data and information management: Concepts, tools, and methods. CRC Press.
➢ Winston, W. L. (2014). Marketing analytics: Data-driven techniques with Microsoft Excel. Pearson Education

Semester	Course Code	Course Title	Total Credits	Type - Elective
3	**BUS 3EM 05**	**DIGITAL MARKETING**	**3**	**Elective - Marketing**

Introduction

Digital marketing course equips with a comprehensive understanding of online marketing strategies and tools. You'll have the knowledge and skills to leverage various social media platforms and other internet based medium that is effectively for brand building, audience engagement, and driving business objectives.

Course Objectives

The course objectives of a digital marketing is aim to provide students with a comprehensive understanding of the various aspects of digital marketing and equip them with the skills needed to navigate the rapidly evolving online landscape. Main objectives are Understanding Digital Marketing Fundamentals, website and content optimization, social media marketing, search engine marketing (SEM) and Pay-Per-Click (PPC) Advertising, email Marketing, analytics and data analysis, mobile marketing, e-commerce and conversion optimization, digital marketing strategy, emerging trends in digital marketing, ethical and legal considerations.

Course Outcomes

By the end of the course, the student will be able to.

Course Outcome	Blooms Taxonomy	Course Outcome

Number	Levels	
1	L2	Understanding all digital marketing tools and its use in marketing
2	L3	Gain proficiency in using key social media platforms
3	L4	Data analysis knowledge is useful to frame strategies in marketing

CO-PO Mapping

CO Number	PO1	PO2	PO3	PO4	PO5
1	3	0	0	1	0
2	2	3	0	0	0
3	2	0	0	3	0

Module	Syllabus	Hours allotted
1	**Fundamentals of digital marketing**: key concepts, terminologies, and principles. Industry Trends: latest trends, technologies, and innovations in digital marketing, Legal and ethical aspects of digital marketing: privacy, data protection, and compliance with regulations, familiarize with various digital marketing tools and platforms used for analytics, social media management, email campaigns.	**3**
2	**Search Engine Optimization**: Introduction to SEO, How do Search Engines work, Organic Search vs. Paid Search Results, Keyword Research, On-Page SEO, HTML Basics optimize your search engine presence through on-site and off-site activities. Target keyword list, optimize your website UX and design and execute a link building campaign, On-page SEO Elements, Technical SEO, Mobile SEO, Schema Markup, Off-Page SEO, Link Building, Social SEO, Local SEO. How to use Google's AdWords, Creation of Google Display Network	**8**
3	**Social Media Marketing** : Introduction to Social Media,manage your social media presence, and how to create effective content for each platform, Facebook Marketing, Creating Content for Facebook & Social Media, Tools for Content Creation, Marketing on Instagram, LinkedIn as a Marketing Platform, Twitter and Snapchat Marketing, Pinterest Marketing & Creating a Successful Digital Marketing Strategy, Social Media Marketing Tools Crafting a Successful Social Media Strategy, Email Marketing & Effective Email Content, SEM(Search engine marketing, Pay-Per-Click (PPC) Advertising	**12**
4	**Web Analytics**: Introduction, measuring, collecting, analyzing and publishing Internet data, Google Analytics Content Performance Analysis, Visitors Analysis, Social Media Analytics, Actionable Insights and the Big Picture, Social CRM & Analysis, Digital Analytics, Platform Principles	**10**
5	**Inbound Marketing**: Inbound methodology, Attracting your potential customers into the conversion funnel, Converting your prospects into leads using emails, Landing Page, Conversion Optimization, Conversion Optimization Patterns for Engaging website Visitors, Lifecycle Emails. mobile marketing, e-commerce and conversion optimization, Digital marketing strategy, emerging trends in digital marketing, ethical and legal considerations.	**12**
	Total	**45 hrs**

(Case Studies to be included)

References:

- ➢ Shama Hyder, 2016.The Zen of Social Media Marketing: An Easier Way to Build Credibility, Generate Buzz, and Increase Revenue.
- ➢ Ryan Deiss , Russ Henneberry · 2020. Digital Marketing for Dummies.
- ➢ Philip Kotler, 2017. Marketing 4.0: Moving from Traditional to Digital.
- ➢ Neil Patel and Muhammad Shahid Nawaz | 30 July 2022, Kindle Edition Email Marketing: How to do it, Strategies, Tools & Examples.
- ➢ Brian Halligan and Dharmesh Shah. Inbound Marketing, Revised and Updated: Attract, Engage, and Delight Customers Online
- ➢ Simon Kingsnorth.2022. Digital Marketing Strategy: An Integrated Approach to Online Marketing Paperback.
- ➢ Pedro Sostre And Jennifer Leclaire. Web Analytics For Dummies.Wiley India Pvt Ltd.

Semester	Course Code	Course Title	Total Credits	Type - Elective
3	BUS 3EM 06	**INTEGRATED MARKETING COMMUNICATION**	3	**Elective - Marketing**

Introduction

This course provides an in-depth exploration of Integrated Marketing Communications (IMC) strategies and practices. It covers the integration of various marketing communication tools to deliver a cohesive and impactful message to the target audience. Students will develop skills in strategic planning, brand management, advertising, public relations, digital marketing, and other elements that contribute to effective IMC.

Course Objectives:

The course objectives for Integrated Marketing Communication (IMC) should aim to equip students with a comprehensive understanding of the principles, strategies, and tools involved in creating and implementing effective integrated marketing communication campaigns.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels	Course Outcome

1	L2	Understand the Concept and Evolution of IMC
2	L3	Master Branding and Positioning
3	L4	Apply IMC Strategies in Real-world Scenarios

CO-PO Mapping

CO Number	PO1	PO2	PO3	PO4	PO5
1	3	0	0	1	0
2	2	3	0	0	0
3	2	0	0	3	0

Module	Syllabus	Hours allotted
1	**Introduction to Integrated Marketing Communications**: Definition and Evolution of IMC. Importance of IMC in Business Strategy. Key Concepts and Models in IMC	**5**
2	**Market Research**: Conducting Market Research for IMC, Branding and Positioning: Brand Development and Management, Creating a Unique Selling Proposition (USP), Positioning Strategies in IMC	**10**
3	**Advertising in IMC**:Principles of Advertising,Types of Advertising Media, Creative Strategies and Execution	**8**
4	**Public Relations and Corporate Communication**: Role of Public Relations in IMC, Crisis Communication, Building and Managing Corporate Reputation. Digital Marketing in IMC, Direct Marketing and Sales Promotion	**9**
5	**IMC Metrics and Evaluation**: Key Performance Indicators (KPIs) in IMC, Analyzing and Measuring IMC Campaigns, Adjusting and Optimizing IMC Strategies Case Studies and Practical Applications Analyzing Successful IMC Campaigns Group Projects: Developing an IMC Plan	**12**
	Total	**45 hrs**

References:

➢ Kenneth E. Clow and Donald E. Baack. Integrated Advertising, Promotion, and Marketing Communications. Pearson

➢ Don Schultz, Philip J. Kitchen, and Kim T. Gordon. Integrated Marketing Communications: Putting It Together & Making It Work. NTC Contemporary.

➢ Larry Percy and Richard Rosenbaum-Elliott: (2023). Strategic Integrated Marketing Communications. Oxford, England: Oxford University Press.(4th ed.)

➢ George E. Belch and Michael A. Belc. Advertising and Promotion: An Integrated Marketing Communications Perspective. Tata McGraw Hill Education

Semester	Course Code	Course Title	Total Credits	Type - Elective
4	BUS 4EM 07	**SERVICES MARKETING**	3	**Elective - Marketing**

Introduction

This course aims at developing a deep understanding of the unique characteristics of services and how they differ from tangible goods. The course also emphasizes the importance of customer-centricity in services marketing focusing on building and maintaining strong customer relationships. The course will equip the student to learn techniques for managing and improving service quality to enhance customer satisfaction and loyalty. It will also help one to understand the consumer behaviour in services and to explore brand-building strategies in the context of services marketing.

Course Objectives

The objectives of this course are as follows:

To equip students with the theoretical and practical knowledge to excel in Services Marketing.

To focus on strategies for delivering and managing high-quality, customer-centric services in diverse industries, fostering market success.

Course Outcomes

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels	Course Outcome
1	L2	Interpret fundamental characteristics that distinguish services from the tangible goods and explain the role of services.
2	L3	Develop a marketing plan for specific service-based businesses.
3	L4	Assess and measure the quality of services delivered
4	L5	Analyze case studies of successful and unsuccessful services marketing campaigns.
5	L5	Create an innovative marketing strategy for a service

CO-PO Mapping

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5

1	3	2	0	0	0
2	0	3	0	2	1
3	0	2	0	3	0
4	2	3	0	0	0
5	0	2	0	3	1

Module	Syllabus	Hours allotted
1	**Consumer Behaviour in Services**: Definition, Meaning and Characteristics of Services-The Services Marketing Mix (7Ps)- Understanding Consumer Decision Making in Services - Customer Relationship Management in Services - -Cultural and ethical Issues in Services Marketing	9
2	**Service Branding and Positioning**: Branding Challenges in Services- Brand Equity in Services - Co-branding in Services- Positioning Strategies for Service Firms- Pricing Strategies for Services - Employees' roles in service delivery- Customers' role in service delivery	9
3	**Measuring Service Quality** Service quality models- SERVQUAL Model- Gap Model of Service Quality-Total Quality Management (TQM) in Services- Service failure and recovery, Measurement Techniques- Customer Surveys, Mystery Shopping, Service Encounters Analysis, Critical Incident Technique	9
4	**Marketing of Professional Services:** Personal Branding for Professionals- Marketing of Banking and Insurance Services-Healthcare Services Marketing-Education services Marketing-Technology and IT Services Marketing- Marketing of Tourism services - Case Studies on popular Service Brands.	10
5	**Emerging Trends in Services Marketing**: Digital Marketing in the Services Industry-Social Media and Services Marketing- Sustainable Services Marketing- Artificial Intelligence in Customer Service- Globalization and Cross border Services--Future Challenges and Opportunities in Services Marketing	8
	Total	**40**

(Case Studies to be included)

References:

➢ Zeithaml, Valarie A and Bitner, Mary Jo (2018): Services Marketing, Tata McGrawHill, New Delhi
➢ Christopher H. Lovelock and Jochen Wirtz. Services Marketing: People, Technology, Strategy (2018). Pearson
➢ K. Douglas Hoffman and John E.G. Bateson. Services Marketing: Concepts, Strategies, & Cases. Cengage Learning, 2016
➢ Kevin Lane Keller. Strategic Brand Management: Building, Measuring, and Managing Brand Equity. Pearson India
➢ Philip Kotler and Thomas Hayes. Marketing Professional Services. Prentice Hall
➢ Mike Schultz and John Doerr. Professional Services Marketing: Wiley Publishers, Toronto.
➢ Dave Chaffey and PR Smith. Digital Marketing Excellence. Taylor & Francis, Milton Park Abingdon, United Kingdom
➢ J.A. Czepiel, M.R. Solomon, and C.F. Surprenant Service Quality: New Directions in Theory and Practice.
➢ Valarie A. Zeithaml, A. Parasuraman, and Leonard L. Berry. Delivering Quality Service: Balancing Customer Perceptions and Expectations.

Semester	Course Code	Course Title	Total Credits	Type - Elective
4	BUS 4EM 08	**INTERNATIONAL MARKETING**	3	**Elective - Marketing**

Introduction

This course immerses students in the intricate world of global markets, examining strategies for cross-border trade, cultural nuances, and geopolitical influences. Delve into theories and practices essential for navigating the complexities of international business and achieving marketing success on a global scale.

Course Objectives

The course objectives for International Marketing are to equip students with a comprehensive understanding of global market dynamics, cultural diversities, and geopolitical influences. Foster critical thinking to devise strategic cross-border marketing plans, enabling students to navigate international business challenges and excel in a dynamic global marketplace.

Course Outcomes

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels	Course Outcome
1	L2	Demonstrate a comprehensive understanding of the differences between domestic and international marketing, as well as the global marketing environment.
2	L3	Apply the knowledge of international marketing concepts to analyse and identify international market opportunities, and develop international marketing plans and make strategic decisions.
3	L4	Critically analyse various international marketing strategies and their impact on global consumers.
4	L5	Propose global marketing strategies that address the unique opportunities and challenges faced by companies, and suggest future trends and sustainable practices in global marketing.

CO-PO Mapping

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	2	0	0	0
2	0	3	0	2	1
3	0	2	0	3	0
4	2	3	0	0	0

Module	Content	Hours Allotted
1	**Introduction to International Marketing:** International marketing; Reasons for internationalization; Impact of globalization on marketing; Analysing international market opportunities; International marketing planning; Theories of international trade; Opportunities and threats of Indian companies in international market; Problems and prospects of foreign companies in Indian market.	9
2	**Understanding Global Consumers:** Political, Economic, Social and cultural, Technological, Environmental and Legal, technological environment influencing the international marketing; Consumer behaviour in global markets; Consumer	9

		segmentation, targeting and positioning in global market.	
3		**Developing Global Marketing Strategies:** Global marketing mix; Product decisions in international marketing; Pricing strategies in global markets; Distribution and promotion in international markets; International distribution channels; Global promotion and advertising strategies; Impact of bilateral and multilateral trade agreements in international marketing, Global expansion plan, factors influencing choosing international marketing locations.	**10**
4		**Market Entry and Expansion Strategies:** International market entry strategies; Expanding Global Footprint; Modes of entry into the international market - Trade related; Contractual; Investment entry; Managing Global Market Entry and Expansion	**9**
5		**Global Marketing Challenges and Future Trends:** Ethical issues and legal aspects of international marketing; Emerging trends in international marketing; Digital marketing in global markets; Sustainable and green marketing practices	**8**
	Total		**45**

References:

➢ Cateora, P. R., & Graham, J. L. (2023). International Marketing. McGraw-Hill Education.
➢ Hill, C. W. L. (2023). International Business: Competing In The Global Marketplace. McGraw-Hill Education.
➢ Hollensen, S. (2023). Global Marketing: A Decision-Oriented Approach. Pearson.
➢ Johansson, J. K. (2023). Global Marketing: Foreign Entry, Local Marketing, And Global Management. McGraw-Hill Education.
➢ Keegan, W. J., & Green, M. C. (2023). Global Marketing Management. Pearson.
➢ Kotabe, M., & Helsen, K. (2023). Global Marketing Management: A Strategic Perspective. Routledge.
➢ Onkvisit, S., & Shaw, J. J. (2023). International Marketing: Analysis and strategy. Cengage Learning.

Semester	Course Code	Course Title	Total Credits	Type - Elective
4	BUS 4EM 09	**SALES & DISTRIBUTION MANAGEMENT**	3	**Elective - Marketing**

Introduction:

This course will equip you with cutting-edge techniques and technologies to excel in the realm of sales and account management. This comprehensive program is designed for professionals aspiring to master the intricate realm of sales and distribution management. From understanding the core definitions to harnessing cutting-edge technology, this course will equip you with the knowledge and skills necessary to excel in today's complex distribution landscape**.**

Course Objectives:

This course aims to impart a deep understanding of sales and distribution management principles. Objectives include equipping students with strategic sales planning, effective distribution channel management, and salesforce leadership skills.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels	Course Outcome
1	L5	Enabling to create sales objectives, and strategies aligned with the organizational goals
2	L4	Making use of sales data for accurate forecasting and decision-making in complex sales situations.
3	L3	Understand and practice sales process and techniques
4	L3	Design an efficient distribution channel based on specific criteria and business goals.
5	L4	Define and use channel information systems and technology for measuring and optimizing distribution performance.

CO – PO Mapping

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	0	0	2	3	0
2	0	3	0	2	0
3	3	0	0	2	0
4	2	3	0	2	0
5	0	3	0	2	0

Module	Syllabus	Hours allotted
1	**Definition of sales management**, Importance of Sales Management in Business, Developing Sales Objectives and Strategies, Recruitment and Training Strategies, Motivation and Incentive Programs for Sales Teams, Key Performance Indicators (KPIs) in Sales,	9
2	**Identifying and Managing Key Accounts**, Personal selling process, Solution-Based Selling Approaches, Overcoming Objections, Effective Closing Techniques Building Long-Term Partnerships, Relationship Selling Techniques, Advanced Forecasting Methods, Predictive Analytics in Sales.	9

3	**Sales and Marketing Integration**, Evaluating Sales Team Productivity, Optimizing Sales Territories, Performance Metrics for Sales Managers, Strategic Sales Audits, The Role of AI and Automation in Sales Leadership	9
4	**Distribution Channel Management**, Evolution of Marketing Channels, Retailing, wholesaling, Measuring Performance of channels, Franchising, Electronic retailing, logistics support to E- retailing.	9
5	**Channel Design and Planning Process**, Channel Management, Channel Information System, Market logistics, supply chain management, Technology in logistics, EDI,Barcoding,RFID.	9
	Total	45

References:

- Thomas N. Ingram, Raymond W. LaForge, Ramon A. Avila, and Charles H. Schwepker Jr Sales Management: Analysis and Decision Making.
- Richard R. Still, Edward W. Cundiff, Norman A.P. Govoni. Sales Management: Decisions, Strategies & Cases. Pearson Education, Latest Edition
- Tanner, Honeycutt, Erffmeyer. Sales Management. Pearson Education. Latest Edition
- Mark W. Johnston and Greg W. Marshall. Sales Force Management. Tata McGraw-Hill, Latest Edition.
- Dr. S. L. Gupta. Sales & Distribution Management. Excel, Latest Edition

Semester	Course Code	Course Title	Total Credits	Type - Elective
Sem 4	BUS 4EM 10	SUSTAINABLE AND SOCIAL MARKETING	4	Elective- Marketing

Introduction:

In the contemporary context marketing has undergone a lot of transformations as an activity and due to the rapidly changing business environment and consumer dynamics. Marketing is now being held accountable by society and this accountability must be addressed and the field of marketing must be utilized to deliver a better societal return and accountability. Thus societal marketing (also defined as behavioural change marketing) and sustainable marketing are becoming a mandate. Both are intertwined as society-environment needs to exist and thrive together for the survival of mankind. Ingrained is the need to create powerful marketing campaigns that will ensure change in behaviors and attitudes towards both society and sustainability

Course Objectives:

The course helps in assessing the impact of marketing on society and the environment and also in developing strategies to integrate sustainable and social marketing into the overall business strategy. The course assists in evaluating the impact of marketing on society and the environment. It also aids in developing strategies to integrate sustainable and social marketing into overall business strategy.

Course Outcomes:
By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Identify the challenges, issues and the processes that need to be addressed in the social and environmental context
2	L4	Analyze and weigh the trade-offs in the marketing decision processes in the context of society and environment.
3	L5	Develop and execute a primary audit of current practices and its impact

4	L5	Prepare suitable plan of action and strategic reports and audits
5	L6	Create and present a suitable marketing plan in the context of behavioral change and "green" marketing strategies

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	2	0
2	0	2	0	3	0
3	2	0	0	3	0
4	2	3	0	0	0
5	0	2	0	3	0

Module	Content	Hours Allotted
1	**Behavioural / Social Marketing: The context, challenges and processes** Definition of Social Marketing: Origins, Difference from commercial sector Marketing; Difference from Non-profit Marketing; Social issues that benefit from Social Marketing; Social marketing compared to other behavior change approaches, such as education and law; Identifying social issues in the Indian context to address.	8
2	**Applying marketing and behaviour principles and strategy to societal marketing strategy** Strategic Marketing Communication: the six building blocks of persuasion: Reciprocity, Scarcity, Authority, Consistency, Liking and Consensus; Branding, Positioning and Framing Routine operational communication vs. strategic marketing communication; Branding, positioning and framing as tools for setting and conveying the value and benefits of behavioural change; Social Marketing Planning Process; Background & Purpose; Situation Analysis, Target Audiences; Objectives & Goals; Barriers & Benefits; Translating formative research into interventions; Redefining segmentation and marketing mix for the social context; Designing Social Marketing Project	10

3	**Sustainable Marketing concept and context** Understanding the concept of sustainable marketing; Key principles and drivers; Challenges and technological responses; The LCA Concept: Sustainability and consumption; Circular Economy; The new consumers; The cost-value-benefit trade-offs; Sustainable Product development.	**9**
4	**Deploying strategic sustainable marketing** Developing the Sustainability Marketing Mix; From products to customer solutions. From cradle-to-grave to Cradle-to-cradle; From price to customer costs; Communications; Convenience	**9**
5	**Managing Change and Ethics** Developing Sustainability Marketing Standards and Strategies: Value chain analysis and marketing audit; Addressing Marketing Challenges and leveraging technology; Ethical issues in social marketing: Pricing, Greenwashing Blue washing and Whitewashing; PR Challenges	**9**
	Total	**45**

References:
- Czinkota, M. R., Kotabe, M., Vrontis, D., & Shams, S. M. R. (2021). Marketing Management (4th ed.). Springer.
- Evans, G., & Karville, M. (2021). Sustainable Marketing: How to Drive Profits with Purpose. Bloomsbury.
- Kotler, P., Lee, N. R., & Colehour, J. (2023). Social Marketing: Behavior Change for Good.
- Lacy, P., Long, J., & Spindler, W. (2020). The Circular Economy Handbook: Realizing the Circular Advantage. https://doi.org/10.1057/978-1-349-95968-6
- Mogaji, E., Adeola, O., Adisa, I., Hinson, R. E., Mukonza, C., & Kirgiz, A. C. (Eds.). (2022). Green Marketing in Emerging Economies. Palgrave Studies of Marketing in Emerging Economies.
- Peterson, M. (2012). Sustainable Marketing: A Holistic Approach. Sage.

Semester	Course Code	Course Title	Total Credits	Type - Elective
3	BUS 3EH 01	**MANAGEMENT OF SELF AND OTHERS**	3	**Elective - HRM**

Introduction:

In today's fast-paced and ever-changing world, effective leadership and self-management skills are more crucial than ever. Organizations are increasingly seeking individuals who can not only lead and motivate others but also manage their own time, emotions, and stress levels effectively. This course will provide the students with the essential skills and knowledge they need to become successful leader and self-managers.

Course Objectives:

This course aims to teach students how an effective manager should act in a competitive environment to improve the efficiency of the organization and the quality of the employee experience. This course gives students an understanding of the psychological factors that directly and indirectly influence employee performance at work and in their personal life.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Explain the key concept of self & peer management
2	L3	Apply emotional intelligence & counselling Skills at the workplace
3	L3	Apply Self-management tools in personal life
4	L6	Develop the framework for effective time management
5	L3	Manage stressors in personal and professional life

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	1	0	0	0	3
2	2	0	0	0	3
3	0	0	2	0	3
4	0	1	3	0	2
5	0	0	3	0	2

Module	Syllabus	Hours allotted
1	Concept of self, Carl Rogers self-concept, Self Esteem, Self-Awareness, Freudian Concepts- Id, Ego, Super-ego, Transactional Analysis-Ego States, Transactions, Life position analysis, stroke analysis, script, and game analysis; Johari Window as tool for Self-Awareness and Interpersonal Awareness	**9**
2	Interpersonal skill; concept and relevance; Assertiveness Training- Importance and Techniques, Importance of time management- analysis of time, urgency –priority matrix, planning time and resource, setting goals and objectives, Creativity- importance of being Creative, developing creativity, enhancing creativity, Theories of Creativity-Investment and confluence theory, Guilford's Structure of Intellect (SI) Model, Divergent Thinking in Creativity	**9**
3	Emotional intelligence in management; components of emotional intelligence- Goleman's Dimensions, the nature of emotional intelligence; evolution of emotional intelligence; applications of emotional intelligence in the workplace; emotional intelligence in Indian organization; improving emotional intelligence, Sensitivity Training	**9**
4	Work Life Balance- factors influencing work life balance, maintaining work life balance, Stress management-personal & organization	**9**

	techniques, burnout management-yoga, meditation and mindfulness, trends in stress management, Introduction to Neuro-linguistic programming (NLP)-Concept and Use of NLP	
5	Counselling Skills for Managers, Approaches in Counselling-Humanistic, Psychoanalytical, Behavioural & Gestalt; Counselling Types, Process, Interventions in Counselling (REBT, CBT), Performance Counselling and other organizational application of counselling skills, Concept of employee wellness & practices to improve mental health at work place	**9**
	Total	**45**

Reference Books

➢ Schermerhorn Jr. J. R., Hunt, J. G. & Osborn, R. N. (1991). Managing organizational behavior. Wiley.
➢ Luthans, F., (2005). Organizational Behaviour, McGraw Hill International Edition.
➢ Daniel Goleman, (2005). Working with Emotional Intelligence. USA: Bantam Books.
➢ Kavitha Singh (2015). Counselling Skills for Managers, PHI

Semester	Course Code	Course Title	Total Credits	Type Elective
3	BUS 3EH 02	HUMAN RESOURCE PLANNING AND RETENTION	3	Elective- HRM

Introduction: Human resource planning, recruitment, selection, onboarding, and retention are crucial elements in the organizational context, impacting a company's success and sustainability. Human resource planning helps companies adapt to changing market conditions and avoid skill gaps. Effective onboarding fosters engagement, accelerates productivity, and reduces turnover. Employee retention initiatives, including competitive compensation, professional development, and a supportive work environment, ensure a stable, skilled workforce. This course would help students to familiarise with these HR practices that are pivotal in achieving organizational objectives and maintaining a competitive edge.

Course Objectives:

The course aims to help the students to apply HRP techniques to forecast labour demand, identify potential talent gaps, and develop succession plans.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Discuss the importance and strategic role of human resource planning in human resource and business management.
2	L3	Apply the sourcing methods and processes to identify the right talent.
3	L3	Apply the art of retaining the right employees, aligning their personal and organizational goals.
4	L4	Analyse the issues related to onboarding and help effective internal placement of human resources.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	0	1
2	3	2		0	0
3	2	0	0	0	2
4	3	0	0	0	2

Module	Syllabus	Hours allotted
1	**Sourcing Strategy and Strategic HR Planning:** Objectives of People Resourcing Strategy; Integrating Business and Resourcing Strategies - Strategic HRM Approach to Resourcing; Creating a Great Place to Work; Employee Value Proposition; Employer Branding. Strategic HR Planning and Forecasting – Objectives and Steps; Strategic HRP – Process, Methods and Tools; Demand and Supply Forecasting; Quantitative and Qualitative Tools for HR Forecasting; HR Inventory; Return on Investment (ROI) in HR Planning. Job Analysis, Job Description and Job Specification – Concept, Steps and Techniques; Job Design.	9
2	**Recruitment:** Recruitment Policy and Approaches; Sources of Recruitment – Internal and External; Advertisement; On-line Recruitment; Job Portals; Social Media Recruitment, HR Apps for Web-Recruiting. Bio-data; Resume, Curriculum Vitae, Weighted Application Blank; Processing Applications; Recruitment Process Outsourcing – Head- hunters and Consultants; Campus Recruitment; Walk-ins, Job Fair; Referrals. Recruitment in New-gen Organizations; Recruitment Cycle/Lead Time. The Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959.	9

3	**Selection:** Selection Tests – Types; Ability Tests, Assessment Centers, Honesty and Integrity Tests, Video-based Situational Testing, Psychometric Testing, Polygraph, Graphology; Validating Tests and Interpreting Test Results. Selection Interviews – Purpose, Types and Techniques; Behavioral Competency-based Interviews; Psychometric Interviews; Advantages and Limitations of Interview; Enhancing Interviewing Skills. Medical Check-up; References and Background Checks; Ensuring Person-Job Fit.	9
4	**On-Boarding and Socialization:** Employment Offers; Psychological Contract. On-boarding and Induction – Meaning and Objectives; Difference between Orientation and Socialization; Employee Orientation – Purpose and Types; Buddy System; Steps in Induction Program; Process of developing Orientation Programs. Placement – Procedures; Probation and Confirmation; Apprenticeship; The Apprentices Act, 1961. Internal Mobility – Transfer and Promotion- Policies and Procedures.	9
5	**Retention Strategies:** Retention Planning and Strategy, Flexibility Planning; De-hiring for Right-sizing; Setting High Performance Standards; Factors affecting Retention; Emergence of Short-term Employment, Temping; Job Hopping; Off- shoring of Jobs; Talent Drain. Bad Recruitment – Cost; Issues of Employability; Labour Wastage – Absenteeism and Labour Turnover; Causes and Cost of Labour Turnover; Causes of Redundancy. Release of the Employee; Voluntary Release, Designing Voluntary Retirement Schemes; Outplacement. Retirement, Superannuation, Dismissal and Retrenchment.	9
	Total	**45**

References:

- ➤ Dipak Kumar Bhattacharyya, Human Resource Planning, Excel Books, New Delhi.
- ➤ Gary Dessler and BijuVarkkey, Human Resource Management: Pearson: Prentice Hall, New Delhi
- ➤ Michael Armstrong, Human Resource Development
- ➤ Sreevastava M.P., Human Resource Planning: Approaches, Needs, Assessment and Priorities in Manpower Planning, Manak Publishers, New Delhi
- ➤ Arun Sekhri, Human Resource Planning and Audit, Himalaya Publishing House

Semester	Course Code	Course Title	Total Credits	Type- Elective
3	BUS 3EB 03	HR ANALYTICS	3	Elective -HRM

Introduction/course summary:

The course aims to equip students to solve HR-related problems by providing an in-depth understanding of the concepts related to HR Analytics and to familiarize them with the current trends in the field.

Course Objectives:

The primary objectives of the HR Analytics course are to equip students with a comprehensive understanding of the principles, methodologies, and tools employed in Human Resources analytics. This course aims to foster an appreciation for the strategic role of data-driven decision-making within the realm of human capital management. Participants will explore key concepts such as workforce planning, talent acquisition, employee performance, and retention analysis. The course seeks to develop conceptual proficiency in leveraging statistical techniques and analytics to extract meaningful insights from HR data.

Course Outcomes

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels	Course Outcome
1	L2	Describe the evolution to data driven decision making in HRM
2	L6	Construct HR dashboards using metrics important for different HR functions
3	L3	Apply concepts and techniques for improving recruitment and selection
4	L3	Apply concepts and techniques for improving talent management decisions
5	L5	Apply latest trends in AI and analytics for improving HR decision making

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	2	3	0	0	0

2	0	0	0	3	2
3	0	2	0	0	3
4	0	3	0	0	2
5	2	3	0	0	0

Module	Syllabus	Hours allotted
1	**Introduction to Business Analytics and Rise of Human Resource (HR) Analytics:** Introduction to data driven decision making; HR analytics framework – PCMM, LAMP; Four levels of HR Analytics; Implementing HR Analytics; Sources of HR data; Meaning and pitfalls of HR Analytics.	**9**
2	**HR Metrics and creating HR Dashboards:** Forecasting HR demand and supply; Talent Development and Reporting Principles (TDRP) and Chartered Institute of Personnel development (CIPD). Types of HR Metrics: Staffing Metrics, Training and Development Metrics, Engagement metrics. Benchmarking; Creating HR dashboards.	**9**
3	**Recruitment and selection analytics:** Introduction to ATS, Recruitment Efficiency; Workforce planning and talent sourcing. Building an inclusive work place; Identifying and dealing with bias in AI Evaluating reliability and validity of models; Optimizing selection and promotion decisions.	**9**
4	**Talent management analytics:** Performance management; Predicting performance and turnover; Cost cutting and lay-off analysis. Training and development analytics; Evaluating training and development. Compensation management; Employee retention and engagement analytics.	**9**
5	**Trends in HR analytics:** Qualitative methods of analysis; Scope of Big data, Machine learning, and Artificial Intelligence in HRM; Employee gamification – application and analysis; Reflection on HR analytics – ethics and limitations.	**9**
	Total	**45**

References:

- Bhattacharya, Dipak Kumar, HR Analytics- Understanding Theories and Applications, Sage Texts, India, 2017.
- Pratyush, Banerjee; Jatin Pandey; Manish Gupta. Practical Applications of HR Analytics, Sage. Texts, India, 2019.
- Ramesh, Soundarajan and Kuldeep Singh, Winning on HR Analytics Leveraging Data for Competitive Advantage Sage Publication India Pvt. Ltd. 2016.

Semester	Course Code	Course Title	Total Credits	Type- Elective
3	BUS 3EH 04	**PERFORMANCE MANAGEMENT**	3	**Elective-HRM**

Introduction:

In today's competitive business environment, organizations are constantly seeking ways to improve employee performance and achieve their strategic goals. Performance management is a systematic process of setting goals, measuring performance, and providing feedback to help employees improve their performance. This course will provide the students with a comprehensive overview of performance management principles and practices.

Course Objectives:

The course aims to help the students learn about the different components of a performance management system, the benefits of effective performance management, and how to implement a performance management system in your organization.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Describe the concept, design and significance of performance management as an HRM function
2	L4	Analyze the Performance Management Process in depth in organizational context

3	L3	Measure the performance of employees using suitable tools/methods
4	L5	Integrate the performance management with other HR functions (for example, reward management, training and development etc.) and the business as a whole.

CO – PO Mapping:

	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	0	1
2	0	3	1	0	0
3	0	3	0	0	2
4	0	0	2	3	0

Module	Syllabus	Hours allotted
1	Performance Management (PM): the concept, conceptual framework of PM, Significance of PM in HRM; Characteristics and Principles of PM; Theoretical Frameworks and its applications on PM: Goal Setting Theory, Expectancy Theory, Attribution Theory, Implicit Personality Theory, Social Cognitive Theory and Social Learning Theory, Self-Efficacy; and Organizational Justice Theory; Recent developments and challenges;	9
2	Performance Management Process: The **Pre-requisites** - strategic planning: Knowledge of organization's vision, mission, and strategic goals, Knowledge of the job and mapped competencies; **Performance Planning**: Approaches: result, behavior, and development oriented; Setting SMART goals, Objectives and key results (OKR), identifying KPAs, KPIs, and KRAs, Benchmarking; **Performance Execution:** determinants of performance, deliberate practice, individual and team level performance; Learning organization and building performing culture.	9
3	**Performance assessment/appraisal:** the concept, result and behavioral approach, Reliability and Validity of Appraisal, Process of Performance Appraisal; Characteristics of Effective Appraisal System; Methods of Performance Appraisal – Confidential Report, 360 Degree Appraisal, Management by Objectives (MBO), BARS, Critical Incident Method, Assessment and Development Centre Approach, Forced Ranking, PCMM; Performance Appraisal for various Roles – Managers, Supervisors and Workmen;	9

4	**Performance Review:** Evaluation Models – Traditional, Kirkpatrick, Philips ROI Method, Brinkerhoff's Success Case Method, Impact Evaluation Process, CIPP Model, Carkhuff's Model of Human Productivity; Post-appraisal Counselling/feedback, importance of feedback, feedback content, types of feedback, Frame of Reference; Briefing and Debriefing; **Performance renewal and re-contracting:** Performance improvement plans, Continuous Improvement; Benchmarking; Performance Personal Effectiveness; High Performance Organizations; **Performance management skills:** coaching and mentoring, Performance Counselling, leadership styles and employee performance	9
5	**Performance Management as a Business Strategy and its Linkages to other HR Subsystems:** High Performance Work Systems; Balanced Scorecard; Linkages to Performance and compensation systems; Linkages to Training and Development, Appraisal as input to identification of Training Needs; Linkages to Career Planning - Career Anchors; Career Development – Strategies, Types and Stages; Developing Career Paths, Coaching for Careers; Employer Life Cycle Career Management; Linkages to Succession Planning – Significance, Steps; and Linkages to manpower Planning and recruitment.	9
	Total	**45**

References:
- Herman Aguinis, Performance Management 3rd edition. Pearson, 2018.
- Dipak Kumar Bhattacharyya, Performance management Systems and Strategies, Pearson, 2011.
- T.V. Rao. Performance Management: Toward Organizational Excellence. 2nd edition, Sage publication, 2016.
- A.S. Kohli & Tapomoy Deb, Performance Management, Oxford University Press, New Delhi
- Srinivas R. Kandula, Performance Management: Strategies, Interventions, Drivers; Prentice- Hall of India, New Delhi
- Ingrid J. Guerra-Lopez, Jossey-Bass, Performance Evaluation, San Francisco, CA.
- Prem Chadha, Performance Management: It's About Performing – Not Just Appraising, MacMillan India Limited, Chennai
- G.K. Suri, C.S. Venkata Ratnam & N.K. Gupta (Eds.) Performance Measurement and Management, Excel Books Private Limited, New Delhi
- Robert Bacal, Performance Management, Tata McGraw Hill.

- B D Singh, Performance Management System – A holistic approach, Excel Books
- Dinesh K Srivastava, Strategies for Performance Management, Excel Books
- Armstrong, Michael., (2018). Armstrong's handbook of performance management: An evidence-based guide to delivering high performance. London: Kogan
- Pulakos, Elainie. (2004), Performance management: A roadmap for developing, implementing and evaluating performance management systems. SHRM Foundation, Alexandria.
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Semester	Course Code	Course Title	Total Credits	Type Elective
3	BUS 3EH 05	**COMPENSATION AND BENEFITS MANAGEMENT**	3	**Elective - HRM**

Introduction:

This course will provide with a comprehensive overview of C&B management. The students will learn about the different components of a C&B program, including base pay, variable pay, benefits, and executive compensation. The students will also learn about the legal and regulatory environment in which C&B programs operate.

Course Objectives:

This course aims at developing expertise in specific areas of C&B, such as base pay, variable pay, benefits, and executive compensation.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L3	Examine the fundamentals and principles of compensation management, and the strategic role of compensation strategy in achieving a competitive advantage.
2	L3	Demonstrate the compensation administration in the Indian context.
3	L6	Design compensation and reward systems for different levels of employees.
4	L4	Analyze the concept of compensation based on incentives, benefits, and services.

CO – PO Mapping:

	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	1	0	0
2	2	0	0	3	0
3	0	3	2	1	0
4	3	0	0	0	2

Module	Syllabus	Hours allotted
1	**Introduction to the course - Understanding Reward Management and Strategy:** Concept and Significance; Compensation, Wage, Salary, and Emoluments; Foundations of Reward System; Economic, Psychological and Motivational Theories relating to Pay; Principles of Reward Determination – Comparable Worth and Equal Pay; Relevance of the Equal Remuneration Act, 1976. Equal Employment Opportunity (EEO) and Affirmative Policy. Reward Strategy; Aligning Compensation Strategy with Business Strategy; Components of Effective Reward Strategy; Broad-brush Reward Strategy; Mechanistic and Organic Compensation Strategies; Total Compensation and Reward Strategy	9
2	**Job Evaluation; Developing Pay Grades and Structures:** Aims, Purpose and Features of Job Evaluation; Type of Job Evaluation; Competence Analysis. Establishing Pay Grades and Structures - Guiding Principles; Internal and External Determinants of Pay Levels; Bringing about Internal and External Equity; Compensation Surveys; Market Rate Analysis; Types of Grades and Pay Structures; Job Family Structure; Broad Banding; Wage Curve: Pay Spines; Designing Grade and Pay Structures – Grade Boundaries, Number of Bands, Width of Grades and Pay Progression; Lifespan of Pay Scales.	9

3	**Compensation Administration in Indian Organizations:** Principles of Wage and Salary Administration; Components of Pay Structure in India – Wage, Basic Pay and Dearness Allowance (DA); Wage Policy in India; Minimum Wage, Fair Wage and Living Wage; Statutory Wage Fixation – Minimum Wages Act, 1948 and Payment of Wages Act 1936; Wage Boards and Minimum Wage Committees, Pay Commission; EPF, ESI; Wage Determination through Collective Bargaining and Adjudication, Wage Tribunals; Role of Trade Unions; Wage Determination for the Unorganized Sector; Cost of Living Index; Methods of Computing Consumer Price Index (AICPI); Linking CPI with DA.	9
4	**Executive Compensation:** Achieving Internal and External Parity, Global Matching; Executive Salary Surveys; Setting Profit Goals for Executives; Compensable Factors – Phoenix Plan and Hay Group Factors; Concept of CTC; Performance Related Pay (PRP), Skill-based Pay and Variable Pay; Competency-based Pay and Reward Programs; Team- based Pay and Rewards; Commission Plans for Sales Executives; Compensation Plans for CEOs and Directors; Executive Benefits and Perks – Gain Sharing Plans, Annual Bonus, Stock Ownership Plans, Golden Parachutes; Gender Disparity in Executive Pay;	9
5	**Incentives, Benefits and Services:** Concepts of Incentives, Bonus, Fringe Benefits, Allowances and Perquisites; Need, Objectives and Types of Benefits and Services; Financial and Non-financial Incentive Plans; Individual Incentive and Recognition Programs; Team Incentive Plans; Designing Effective Incentive Programs; Linking Pay and Productivity; Productivity Agreements; Profit and Gain Sharing, ESOPs, Insurance, Health Schemes, Pension Plans, Welfare, Recreation, Fun and Games.; Relevant Provisions of the Payment of Bonus Act, 1965	9
	Total	**45**

References:

➢ Michael Armstrong, Handbook of Reward Management Practice, Kogan Page, London
➢ Michael Armstrong et. al., Job Evaluation: A Guide to Achieving Equal Pay, Kogan Page, London
➢ Gary Dessler and Biju Varkkey, Human Resource Management, Pearson: Prentice Hall, New Delhi
➢ A.M. Sharma, Understanding Wage Systems, Himalaya Publishing House, Mumbai
➢ Tanuja Agarwala, Strategic Human Resource Management, Oxford University Press, New Delhi.

➢ Milkovich, Newman & Gerhart, Compensation, TMH, 2011, 10th Edition
➢ Luis R. Gomez-Mejia & Steve Werner, Global compensation - Foundations and perspectives Routledge, 2008.
➢ Richard I. Henderson, Compensation Management in a Knowledge-Based World, Pearson Education, 2009, Latest Edition.
➢ B D Singh, Compensation and Reward Management, Excel Books, 2008
➢ Tapomoy Deb, Compensation Management, Text and Cases, Excel Books, 2009, 1st Edition.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
4	BUS 3EH 06	**INDUSTRIAL RELATIONS**	3	**Elective-HRM**

Introduction:

In today's complex and ever-changing business environment, organizations must foster harmonious and productive relationships with their employees. Industrial relations, also known as labor relations, is the study of the relationship between employers, employees, and their representatives, such as trade unions. It encompasses various aspects of the employment relationship, including collective bargaining, dispute resolution, labour laws and regulations, and employee participation.

Course Objectives:

This course aims to provide the students with a comprehensive introduction to the field of industrial relations. The students will gain a deep understanding of the historical context and evolution of industrial relations, the key concepts and principles that govern labour relations, and the contemporary challenges and opportunities facing organizations in managing their workforce.

Course Outcomes:

By the end of the course, the student will be able to.

CO – PO Mapping:

Course Outcome Number	Blooms Taxonomy Levels (BTL)	PO 1	PO 2	PO 3	PO 4	PO 5	Course Outcome
1	L2	3	0	0	1	0	Describe the meaning, evolution, approaches, and strategic role of industrial relations in achieving the organizational goals
2	L2	3	0	0	2	0	Explain the theoretical foundations of the trade union movement, developments and its implications in the changing industrial environment.
3	L2						Discuss the concept, process, techniques, and legal frameworks of collective bargaining, discipline, grievance management, and dispute settlement.
4	L3						Apply the appropriate interventions to promote labour-management cooperation and a conducive environment for achieving the organizational goals.

Module	Syllabus	Hours allotted
1	**Introduction to the Course** - Industrial Relations: Philosophy and Concept; Origin and Development of IR; Context and Environment of IR; Approaches to IR; Human Relations Approach, Psychological Approach, Sociological Approach, Gandhian Approach, Marxian Approach, Dunlop's System Approach.	**9**
2	**Trade Unions:** Concepts and Objectives, Registration, Structure, Functions, Membership, Union Leadership, Trade Union Disputes, Recognition of Trade Unions, Indian Trade Unions Act, 1926. **Participative Management:** Concept, Objectives, Evolution; Industrial Democracy, Participative Models, Approaches, Forms of Participation, Levels of Participation; Employee Empowerment; Evaluation of Schemes in India.	**9**
3	**Collective Bargaining:** Concept, Origin and Development; Pre-requisites for Effective Collective Bargaining, Process of Collective Bargaining; Collective Bargaining Approaches and Techniques; Collective Bargaining and Legal Framework; Trends and Practice of Collective Bargaining in India.	**9**

4	**Discipline:** Nature and Concept, Approaches to Discipline; Statutory and Non-statutory Measures for Discipline; Standing Orders, Service Rules, Code of Discipline. Grievance: Concept, Significance, Methods of Redressal. Domestic Enquiry: Principles of Natural Justice; Misconducts, Disciplinary Procedures, Punishment, Positive Disciplinary Intervention, Remedial Counselling; Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.	9
5	**Industrial Disputes:** Causes, Manifestation and Effects, Trends in Industrial Disputes in India; Instruments of Economic Coercion; Strike, Lock-out, Lay-off, Retrenchment and Closure; Unfair Labour Practices. Dispute Settlement Machinery; Industrial Disputes Act, 1947; Collective Bargaining, Conciliation, Voluntary Arbitration, Adjudication; Industrial Relations Audit; Industrial Relations Research.	9
	Total	**45**

References:

- C.S. Venkata Ratnam, Industrial Relations
- Ratna Sen, Industrial Relations in India: Shifting Paradigms
- Mamoria, C. B., Mamoria S., Gankar, S.V. (2008). Dynamics of Industrial Relations. Himalaya Publishing House, Mumbai.
- Sinha, P.R.N., Sinha, I. B. & Shekhar P. (2004). Industrial Relations, Trade Unions, and Labour Legislation. Pearson Education India
- S.C. Srivastava, Industrial Relations and Labour Laws
- P.C. Tripathi, Personnel Management & Industrial Relations
- R. S. Davar, Personnel Management & Industrial Relations
- John Gennard, Graham Judge, Tony Bennett, Richard Saundry (2016). Managing Employment Relations. Kogan Page

Semester	Course Code	Course Title	Total Credits	Type Elective
4	BUS 4EH 07	INTERNATIONAL HUMAN RESOURCE MANAGEMENT	3	Elective -HRM

Introduction:

In today's interconnected world, businesses are increasingly operating across borders. This has led to a growing demand for professionals with expertise in international human resource management (IHRM). IHRM is the process of managing people in a global context. It encompasses a wide range of activities. IHRM is a complex and challenging field, but it is also a rewarding one. IHRM professionals play a critical role in helping businesses succeed in the global marketplace.

Course Objectives:

This course aims to develop a global mindset and a strategic approach to IHRM that aligns with the organization's overall business goals.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Describe the challenges and strategies involved in managing a diverse and globally dispersed workforce.
2	L3	Examine the evolving role of HR in the context of different cultures.
3	L3	Apply best practices in global talent management, team building, and organizational leadership.
4	L4	Illustrate new business models and best practices for promoting competitive and sustainable advantage for the business.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	1	0	0	3	0

2	2	0	0	3	0
3	0	0	2	3	0
4	0	0	2	3	0

Module	Syllabus	Hours allotted
1	**Introduction and Evolution of International Human Resource Management (IHRM):** Introduction to international business-Local, regional, national, international and global business; Business entry strategy-exporting, licensing, investment, joint ventures, green field investment, strategic alliance, global strategic partnerships; Management orientation of overseas business-ethnocentric, poly centric, region centric and geocentric orientation.	9
2	**Cross-Cultural Communication:** International business environment: Political, Economic, Social, Technological, Legal, Environmental (PESTLE Analysis); Natural and demographic environment; Hofstede and Trompenaars Cultural Dimensions; Cultural Agility, Cultural Intelligence and Multi-Cultural Orientation of Employees; Diversity, Equity, Inclusion and Belonging (DEIB).	9
3	**Global Talent Management:** Networking and Global Organizational Learning Systems; Global mindset, global competencies, in the international organization; Global Management Development techniques and characteristics; Global Code of Conduct-ethical challenges; Global Health & Safety.	9
4	**Integration of International Business**: Goals of the various International Trade Agreements; Free trade area, Customs Union, Common Market- Economic Union-Bilateral and Multilateral Trade Agreement and WTO, IMF, WORLD BANK, BRICS BANK; Hybrid work models.	9
5	**Global Digital Transformation**: Organizational structure and control system for international business: Centralized Vs decentralized structure-functional, divisional, product based and matrix structure; Knowledge Management and Quality Performance in Knowledge Based Organizations (KBOs), Global workspace using ICT (Information and Communications Technology) and HRIS (Human Resource Information System).	9

	Total	45

References:

- VSP Rao: Human Resource Management—Text and Cases.
- Anu Chadha, Human Resources Management (HRM) and Globalization, New Century Publications
- Peter J. Dowling, Marion Festing, and Allen D. Engle. International Human Resource Management Paperback, 2017.
- Ibraiz Tarique, Dennis R. Briscoe, and Randall S. Schuler. International Human Resource Management: Policies and Practices for Multinational Enterprises.
- David G. Collings, Hugh Scullion, and Paula M. Caligiuri, Global Talent Management.
- Fernandez and Leidner. Knowledge Management - Enabling Business Growth, Tata McGrawHill, New Delhi
- Anant K Sundaran and J. Stewart Black: The international Business environment.
- Porter. Competitive strategy
- Friedmann and J. Kim. Political risk and international Business
- Rakesh Mohan Joshi. International Business
- M.L. Jhingan: International Economics, Vrinda Publications

Semester	Course Code	Course Title	Total Credits	Type Elective
4	BUS 4EH 08	MANAGEMENT OF CHANGE AND ORGANIZATIONAL DEVELOPMENT	3	Elective-HRM

Introduction:

Change is a constant in today's world, and organizations that are unable to effectively manage change are at risk of failure. Change management is important because it helps organizations to achieve their strategic goals, adapt to changing market conditions, improve employee performance and reduce resistance to change.

Course Objectives:

The objectives of studying Management of Change and Organizational Development include: Gaining a deeper understanding of the complex nature of change; Developing the skills necessary to effectively manage change in organizations; Preparing for a career in a variety of fields, including human resources, consulting, and management; and enhancing your ability to lead and manage others through change.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Describe an overview of forces of organizational change, types of change, theoretical framework of change and recent development in organizational change.
2	L3	Demonstrate the ways of managing resistance to change and methods for handling resistance to change.
3	L3	Examine the conceptual based approach towards understanding the implications of organizational change in order to meet the specific needs of the organization through OD techniques.
4	L4	Apply OD techniques o systematically analyze and create effective strategies to address the unique requirements of organizational change.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	1	0
2	3	0	2	0	0
3	3	0	0	2	0
4	3	2	0	0	0

Module	Syllabus	Hours allotted
1	**Understanding Organizational Change:** Nature and Philosophy of Organizational Change; Need for Organizational Change; Forces of Change; Types of Change – Planned and Emergent Changes; Theoretical Framework of Organizational Change; Perspectives on Organizational Change; Strategies of Change Management - Top Down and Bottom-Up Strategies; Models of Change – Process Based Change Models: Kurt Lewin's Model of Change; Schein's Model of Change; Model of Evolving Managerial Interpretation of Change.	9
2	**Organizational Transformation (OT):** Concept of Transformation and Transition; Emergence of OT; Drivers of OT; Types of Transformational Change; Types of OT Interventions – Analytical Tools and Techniques; Strategic, Operational, Cultural, IT-driven and HR Interventions; OT through Teamwork; Future Trends in OT. Organizational Effectiveness (OE) and Excellence; Contemporary Models of Organizational Effectiveness and Excellence; Activities of OE: Measuring OE.	9
3	**Managing Resistance to Change:** The Concept and Nature of Resistance; Factors contributing to Resistance; Conventional Wisdom; Tipping Point; Sources of Individual Resistance to Change; Behaviour Elements of Resistance; Socio-psychological Stress and Resistance to Change; Sources of Organizational Resistance; Types of Resistance; Recognizing Resistance; Handling Resistance to Change; Techniques for Managing Resistance; Implications of Resistance.	9

4	**Implementing Organizational Change:** Implementing Organizational Change – Techniques; Role of Change Agents and Leadership in Organizational Change; Becoming a Master Change Agent; Skills for Managing Change; Strategies for Organizing Change – Leveraging Structure and Systems: Power, Leadership, Performance, Technology and TQM Practices; Organizational Culture and Change. Measuring Change: Designing Effective Control Systems.	9
5	**Organizational Development (OD) - Intervention and Strategies:** OD – Concept, Evolution and Characteristics; Need for OD; Important Triggers for OD; Approaches and Models of OD; OD Process - Diagnosing, Collecting Information, Analysing Information, Designing Interventions and, Leading and Managing Change. Phases in OD Interventions – Human Process, Techno-Structural, Human Resource Management and Strategic Change Interventions. Emerging OD Approaches and Techniques; OD and Diversity Management.	9
	Total	**45**

References:

➢ Theory of Organizational Development and Change, Thomas G Cummings; Cristopher G Worli, Cengage Learning, New Delhi
➢ Organizational Change and Development, Dipak Kumar Bhattacharyya, Oxford University Press, New Delhi
➢ Change Management and Organizational Transformation, Radha R. Sharma, Tata McGraw Hill Education Private Limited, New Delhi
➢ Organizational Change: Themes and Issues, Jim Grieves, Oxford University Press, New York
➢ Change Management: A Guide to Effective Implementation, Robert A. Paton and James McCalman, Sage Publication India Private Limited, New Delhi

Semester	Course Code	Course Title	Total Credits	Type Elective
4	BUS 4EH 09	**COMPETENCY-BASED HUMAN RESOURCE MANAGEMENT**	3	Elective - HRM

Introduction:

In today's dynamic and competitive business environment, organizations are increasingly recognizing the importance of aligning their human resource (HR) practices with their strategic goals. Competency-based human resource management (CBHRM) is a strategic approach that focuses on identifying, developing, and deploying the knowledge, skills, and abilities (KSAs) needed to achieve organizational success.

Course Objectives:

This course will provide you with a comprehensive introduction to CBHRM principles, practices, and applications. The students will gain a deep understanding of how to use competencies to: Recruit and select the right people for the right jobs; Develop and train employees to reach their full potential; Manage performance effectively; Design and implement compensation and benefits programs that attract, retain, and motivate top talent; Create a culture of high-performance and continuous learning.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Comprehend and appreciate the integrative nature of talent management practices brought about by sets of key competencies.
2	L2	Explain the mapping competencies and modelling them for the practice of the talent management functions.
3	L3	Assess the competencies related to the specific job role and familiarize with the suitable tools.
4	L4	Illustrate the process of implementation of various competency-based human resource practices in organizations.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	0	2
2	3	0	0	0	2
3	0	3	0	0	1
4	3	0	0	0	2

Module	Syllabus	Hours allotted
1	**Competency-Based Talent Management:** An Overview Concepts of Knowledge, Skill, Potential and Competency; Significance of Behavioural Competencies; Types and Levels of Competencies; Macro View of Competency Framework – Steps involved; Challenges of Competency-based HRM – Organizational Context, Top Management Support, Process Rigour and Cost; ROI of Competency Management; Benefits of Competency-based HRM; Criticism against Competency-based HRM.	9
2	**Competency Mapping:** Approaches of Competency Mapping – Top- down, Bottom-up and Generic Competency Model Approaches; Process of Competency Mapping; Getting Ready for Competency Mapping – Steps involved; Identifying Job Roles for Competency Mapping; Setting Performance Effectiveness Criteria; Data Collection for Identification of Competencies; Organizing Competencies Identified.	9
3	**Competency Modelling:** Analysis of Data of Competencies; Analytical Tools used for different methods of Data Collection; Classification of Competency Models – Organization-wide, Function-wise and Role- wise Classification; Proficiency Levels and Weightage of Competencies; Validation of Competency Models; Listing Competencies and Distinguishing Competencies; Execution of Competency Model.	9
4	**Competency Assessment:** Need for Competency Assessment; Process of Competency Assessment; Designing a Competency Assessment Programme; Different Types of Assessment Exercises – Case Study, Critical Incident Technique, Intelligence Tests,	9

	Emotional Intelligence Tests, Projective Tests, Personality Tests, Leaderless Group Discussion, Competitive Discussions, Management Games, Career Anchor Assessment Tools, Culture Assessment Tools, Assessment Centres. Executing Competency Assessment Programme; Cost Benefit Analysis of Competency Assessment Programmes.	
5	**Competency-Based HRM Applications:** Designing, Developing, Implementing and Reviewing Competency-Based Talent Management Practices – Resource Planning, Competency Descriptions and Specifications; Hiring Plan, Assessment Tests, Selection Decision, On-Boarding Process; Training and Development Plans, Compensation Strategy, Compensation Management, Performance Management, Career and Succession Planning.	9
	Total	**45**

References:

➢ Srinivas R. Kandula, Competency-Based Human Resource Management, PHI Learning Private Limited, New Delhi
➢ Dubois, D. and Rothwell, W., Competency-Based Human Resource Management, Davies-Black Publishing
➢ Ulrich, D. and Brockbank, W., The HR Value Proposition, Harvard Business School Press, Boston
➢ Lucia, A.D. and Lepsinger, R., The Art and Science of Competency Models: Pinpointing Critical Success Factors in Organizations, Jossey-Bass, San Francisco, CA
➢ Wood, R. and Payne, T., Competency-Based Recruitment and Selection, Wiley Publications, New Jersey

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
4	BUS 4EH 10	**MANAGEMENT OF TRAINING AND DEVELOPMENT**	3	**Elective - HRM**

Introduction:

In today's ever-changing business landscape, organizations need to continuously invest in their employees' skills and knowledge to stay competitive and achieve their goals. Training and development (T&D) is a crucial aspect of human resource management that focuses on enhancing the competencies and capabilities of individuals and teams to improve their performance and contribute to organizational success.

Course Objectives:

This course will provide the students with a comprehensive understanding of the principles and practices of managing T&D programs. The students will gain insights into the role of T&D in organizational development, the process of identifying training needs, designing and developing effective training programs, delivering training, and evaluating the impact of T&D interventions.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Explain the key principles and process of an effective training and development program
2	L3	Outline a simple training module based on identified learning objectives.
3	L4	Differentiate between various training methods and their appropriateness for different learning/training needs
4	L6	Design and develop a comprehensive training program with proper training need assessment

CO – PO Mapping:

	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	0	1
2	3	0	0	0	2
3	0	3	0	0	2
4	0	3	1	0	2

Module	Syllabus	45 Hours
1	**Training and Development as an HRM function**-Importance of training function, Difference between training, learning, development and education, Outcome based Education, System view of training, ADDIE Model, Strategic Training & Development, Shift to Learning from Training perspective	9
2	**Learning Theories & Models**: VAK Model, Experiential Learning, Kolb's Model, Adult Learning Theory, Andragogy, Pedagogy, Synergogy, Principles/Law of Learning, Blooms Taxonomy, Gagne's Events of Instructions & Learned Capabilities, Learning Organization, E- Learning- Types: Synchronous and Asynchronous	9
3	**Training Need Assessment**-Organizational Analysis, Task Analysis, Person Analysis, Data Collection for TNA, Training Design, Training Objectives, Transfer of training- Theory of identical elements, stimulus generalization approach, cognitive theory of transfer; Factors influencing transfer, Role of learning theories in training design, Development of Training Program-Lesson/Course Plan, Content Creation, Selecting and preparing the training site, training room, seating arrangements, choosing and preparing trainers, Importance trainers' training	9
4	**Training Implementation**, Training Plan & Budgeting for Training, Outsourcing of Training, Training Coordination, Training organizations, Role of Training in employee	9

	engagement, Formative evaluation, summative evaluation, evaluation data collection, Kirkpatrick's model of evaluation, Jack Philips Training evaluation model & ROI of Training, Evaluating the cost of training, Cost/benefit Analysis	
5	**Management Development**-Concept, Methods & Importance, Leadership Development, Talent Development, Talent Development Associations, Gamification, Team Building, Management Games & Ice Breakers, Activity based learning, Blended Learning, MOOC, Learning Management System, Upskilling and reskilling, Virtual Reality &Artificial Intelligence in learning, Micro learning; Diversity, Equity, and Inclusion (DEI) in Training,	9
	Total	**45**

Reference Books

➢ Noe, R. A., & Kodwani, A. D. (2018). *Employee training and development*, 7e. McGraw-Hill Education.

➢ P. Nick Blanchard, James W. Thacker and V. Anand (2011). *Effective Training: Systems, Strategies, and Practices*, 4e, Pearson Education

➢ Rolf P. Lynton and Udai Pareek (2011). *Training for Development*, 3e, Vistaar Publications (Sage Group)

SPECIALISATION – OPERATIONS, LOGISTICS & SUPPLY CHAIN MANAGEMENT

Semester	Course Code	Course	Total Credits	Type Elective
Sem 3	BUS 3EOM 01	LOGISTICS AND TRANSPORTATION MANAGEMENT	3	Elective - Operations

Introduction:

In today's globalized economy, effective logistics and transportation management are essential for businesses to compete successfully. This course provides a comprehensive introduction to the principles and practices of logistics and transportation management. This course is designed for students interested in pursuing a career in logistics and transportation management.

Course Objectives:

The course aims at making the students recognize the importance of logistics and transportation management in achieving organizational goals and appreciate the complexities and challenges of managing logistics operations in a global context.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Discuss the concepts and practices in logistics management.
2	L2	Explain distribution network and requirement planning.
3	L2	Explain the importance of transportation in logistics.
4	L2	Describe the importance of packing and packaging in logistics.
5	L5	Evaluate logistics facilities design.

CO – PO Mapping:

	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	1	0	0	0
2	2	3	0	0	0
3	2	3	0	0	0
4	3	1	0	0	0
5	2	3	0	0	0

Module	Syllabus	Hours allotted
1	**Introduction to Logistics:** Definition, Evolution, Importance; Logistics Audit and Control; Measures of logistics; International Logistics Management; Logistics Future Directions. Warehousing and Storage	7
2	**Distribution:** Logistics and its interface with Production and Marketing; Physical distribution and logistics. Distribution network planning, Distribution network decisions, Distribution requirement planning (DRP). Location Decisions.	8
3	**Transportation:** Basics of Transportation, Transportation Systems: Facilities and Services; Multimodal Transport: Modal characteristics; Modal Comparisons; International Air Cargo Transport; Coastal and Ocean transportation, Characteristics of shipping transport- Types of Ships. Trends in Transportation. Communication systems-Automatic vehicle location systems, Geographic information Systems. Case Studies and Latest Updates.	10
4	**Packing and Packaging:** Meaning, Functions and Essentials of Packing and Packaging, Packing for Storage- Overseas Shipment, Inland-Transportation - Product content Protection, Packaging Types: Primary, Secondary and Tertiary - Requirements of Consumer Packaging, - Shrink packaging –Identification codes, bar codes, and electronic data interchange (EDI)- Universal Product Code- GS1 Standards- package labels- Symbols used on packages and labels. Case Studies and Latest Updates.	10

5	**Special Aspects of Export Logistics:** Picking, Packing, Vessel Booking [Less-than Container Load (LCL) / Full Container Load (FCL)], Customs, Documentation, Shipment, Delivery to distribution centers, distributors and lastly the retail outlets- Import Logistics: Documents Collection- Valuing- Bonded Warehousing Customs Formalities- Clearing, Distribution to Units. Case Studies and Latest Updates.	10
	Total	**45**

References:

➢ Bowersox, Closs, Cooper, Supply Chain Logistics Management, McGraw Hill.
➢ Janat Shah, Supply Chain Management, Pearson Education India, 2009.
➢ Sunil Chopra, Peter Meindl, Supply Chain Management: Strategy, Planning, and Operation, Pearson, 2010.
➢ Michael B Stroh, Practical Guide to Transportation and Logistics, Logistics Network, 2006.
➢ Alan Rushton, John Oxley, Handbook of Logistics & Distribution Management, Kogan Page Publishers, 2000.
➢ Raghuram and N. Rangaraj, Logistics and Supply chain Management- Leveraging Mathematical and Analytical Models: Cases and Concepts, New Delhi: Macmillan, 2000.
➢ Burt, Dobbler. Starling, World Class Supply Management. TMH.
➢ Donald J Bowersox. David J Closs, Logistical Management. TMH
➢ Pierre David. International Logistics. Biztantra.

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Semester	Course Code	Course Title	Total Credits	Type Elective
3	BUS 3EOM 02	**WAREHOUSING AND INVENTORY MANAGEMENT**	3	**Elective-Operations**

Introduction:

This comprehensive Warehousing and Inventory Management course covers essential topics for efficient logistics and supply chain operations. It starts with warehousing evolution and types, emphasizing efficient design. It then explores inventory fundamentals and technology integration, including RFID and Warehouse Management Systems. Safety and compliance, with a focus on green warehousing and IoT, are also covered. Students will gain the skills needed to optimize processes, reduce costs, and ensure safety and compliance in modern warehousing and inventory management.

Course Objectives:

This course aims at helping the students to gain a comprehensive understanding of warehousing and inventory management principles and practices. They will be able to identify, analyze, and optimize warehousing and inventory operations to achieve organizational goals. Students will develop the skills to design and implement effective warehousing and inventory management systems, including warehouse layout and design, inventory control techniques, and order fulfillment processes. They will also learn how to measure and monitor warehousing and inventory performance, manage risks, and adapt to changing business needs. By the end of the course, students will be well-equipped to contribute to the success of any organization that relies on warehousing and inventory management for its operations.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels	Course Outcome
1	L2	Understand the evolution, types, and operational principles of warehouses, including specialized ones. Recognize the lifecycle of goods within warehouses.
2	L6	Proficiently design efficient warehouses and layouts, optimizing space and ensuring smooth operations.
3	L4	Master inventory management fundamentals, including types, control techniques, and stock management strategies.
4	L5	Gain expertise in technology integration, safety, compliance, and emerging warehousing concepts,

| | | | such as green warehousing and IoT. | |

CO – PO Mapping:

	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	1	0
2	2	3	0	1	0
3	2	3	0	0	0
4	3	0	0	2	0

Module	Syllabus	Hours allotted
1	**Introduction to Warehousing:** Definition - Evolution - Modern Business Needs - Transformation - Traditional Warehouses - E-commerce Warehouses - Fulfillment Centers - Specialized Warehouses, Location decisions, Role of warehouse manager, Operational Principles	9
2	**Warehouse Design and Layout:** Efficient Design Importance - Design Principles, Design Implications: Operations, Safety, Profitability – Storage & Handling Solutions, Space Optimization, Warehouse layout -warehouse processes Case study/Field visit	9
3	**Inventory Management:** Inventory Definition - Inventory Types - Economic Implications - Control Techniques: ABC Analysis, JIT, EOQ, Reorder Points (with problems) Inventory Policies - Economic Significance	10
4	**Technology in Warehousing:** Identification: Barcode vs. RFID - WMS: Features, Benefits, Integrations - Strategic Role of WMS – AI & Automation: Robots, Conveyor Systems, Warehouse cost Case study	9
5	**Safety, Compliance, and Future:** Safety Protocols - PPE - Economic Implications of Accidents - Regulations: Local, International - Certifications - Non-compliance Implications - Future Concepts: Green Warehousing, Smart Warehousing, IoT, AI	8
	Total	**45 hours**

References

➢ Richards, G. (2019).Warehouse Management: A Complete Guide to Improving Efficiency and Minimizing Costs in the Modern Warehouse. Kogan Page.

➢ Muller, M. (2011). Essentials of Inventory Management. AMACOM.
➢ Dr. C. Rama Krishna. (2014). Logistics and Supply Chain Management. Pearson.
➢ Rahul V. Altekar. (2018). Supply Chain Management: Concepts and Cases. Himalaya Publishing House.

Semester	Course Code	Course Title	Total Credits	Type Elective
Sem 3	BUS 3EOM 03	**SERVICE OPERATIONS MANAGEMENT**	3	**Elective - Operations**

Introduction:

In today's service-dominated economy, the ability to effectively manage service operations is essential for business success. Services Operations Management (SOM) provides a framework for understanding, designing, and managing service processes to deliver superior customer value. This course introduces the key concepts, principles, and tools of SOM, equipping students with the knowledge and skills to excel in this dynamic and growing field.

Course Objectives:

Upon successful completion of this course, students will be able to:

Identify and analyze the key components of a service system
Apply SOM principles to real-world service scenarios
Design and implement effective service strategies

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L4	Analyze the key differences between service and manufacturing operations, and evaluate the strategic role of service operations in the broader context of business strategy.
2	L3	Apply service facility design principles, including layout and location decisions, in order to enhance the overall efficiency and effectiveness of service operations.
3	L5	Evaluate various methods and tools for measuring and ensuring service quality, and assess their application in different service contexts.
4	L6	Design strategies for enhancing service delivery propositions, including forecasting demand, managing capacity, and addressing customer expectations, to improve overall service delivery.

CO – PO Mapping:

	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	2	0	0	0
2	2	3	0	0	0
3	2	3	0	0	0
4	2	3	0	0	1

Sl. No.	Module	Syllabus	Hours allotted
1	1	**Introduction to Service Operations:** Introduction; Nature & Role of Services; Service vs. Manufacturing Operations ; classification of Service Operations; The Role of Service Operations in Business Strategy; Service Strategy	8
2	2	**Service Operation**: Infrastructure Service Facility design, Layout and Location , facility location decision factors , New service development, Service Encounter ; Servicescape	9
3	3	**Service Quality and dimensions in Service Quality**; gap in service quality, Measuring Service quality- SERVQUAL model ; Designing quality in service - Poka yoke & Tauguchi method ; Service Process Improvement & Control; TQM tools in services	10
4	4	**Managing Capacity and demand**; Forecasting Demand for Services; Customer Expectations and the Planned Provision in Service Delivery; Service recovery, Inventory Management for Improved service Delivery; Service Growth and Globalization	10
5	5	**Incorporating AI and Other Latest Technologies in Service Operations**:Introduction to AI and other new age technologies. AI as a service (AIaaS).	8
		Total hours	45

References:
➢ Bordoloi, S., Fitzsimmons, J. A., & Fitzsimmons, M. J. (2023).10th edition . Service Management: Operations, Strategy, Information Technology. McGraw-Hill Education.
➢ Shulver, M., Johnston, R., & Clark, G. (2021) 5th edition. Service Operations Management. Pearson.

Semester	Course Code	Course Title	Total Credits	Type Elective
Sem 3	BUS 3EOM 04	LEAN MANAGEMENT	3	Elective - Operations

Introduction: To outline the need for Lean Management; To highlight different techniques of Lean implementation; Principles and practices of lean management; Six sigma and application six sigma in industry.

Course Objectives:

This course aims at developing a comprehensive understanding of Lean Management and its principles, tools, and techniques. The students will be able to apply Lean to improve processes and eliminate waste in any organization.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L 2	Define and understand the basic concepts, principles and practices of Lean Management in operations of a business
2	L 3	Critically analyse the operational issues of an Industry or businesses in comparison to the best practices globally
3	L 4	Apply the tools and Techniques of Lean management in optimization of operations of a firm and to plan for sustainable growth
4	L 5	Evaluate the organization based on the KPIs measuring operational excellence and evaluate it objectively to take operational decisions

CO – PO Mapping:

	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	2	0	0	0
2	0	3	0	2	0
3	2	3	0	0	0
4	0	3	0	2	0

Module	Syllabus	Hours allotted
1	**Introduction To Lean Management And Lean Elements**: Introduction to seven wastes and their narration; Evolution of lean; Global competition, Lean Manufacturing, Need for LM, Elements of LM. Lean Principles: Overview, Value & Value Stream Principles; Flow & Pull Principle; Perfection.	8
2	**Lean Tools And Techniques** - Various tool of LM, Fundamental blocks of Lean, Impact of Seiri, Seiton, Seiso, Seiketsu and Shitsuke, Need for TPM, Pillars of TPM, Implementation of TPM, Overall Equipment Effectiveness (OEE) and its computation.	7
3	**Value Stream Mapping**: Future State Exercise on Value Stream Mapping – Future State - 5S – Importance & Implementation Total Productive Maintenance (TPM) – Introduction TPM Implementation. Value Stream Mapping: Current State Exercise on Value Stream Mapping – Current State Takt Time, Cycle Time, Lead Time, Throughput Time 8 Wastes of Lean - Case Study: Flow & Pull Kanban Single Piece Flow	10
4	**Lean System**: Features manufacturing and services, Workflow, Small lot sizes, Pull Method, Kanban, A3 problem solving, Just In Time. Lean Problem-Solving Introduction Lean Problem-Solving Techniques 7 QC Tools - Root Cause Analysis Corrective Action Lean - Six Sigma, DMAIC Methodology	10
5	**Lean Management And Implementation** Standardized work, Continuous improvement. Lean projects: Training, selecting the members, preparing project plan, implementation, review. Productivity Improvement: Process, machinery Operator and equipment. Lean Continuous Improvement: Concepts and Methodology Lean Reporting Tools Lean Reporting, Lean Leadership. Sample Project on - Lean application in Office Areas or Industry or Business	10
	Total	**45**

References:

➤ Arnheiter, E. D., & Maleyeff, J. (2005). The integration of lean management and Six Sigma. The TQM magazine, 17(1), 5-18.

➢ Charron, R., Harrington, H. J., Voehl, F., & Wiggin, H. (2014), The lean management systems handbook (Vol. 4). CRC Press.

➢ Feld, W. M. (2000). Lean manufacturing: tools, techniques, and how to use them. CRC press.

➢ Liker, J. K., & Convis, G. L. (2012). The Toyota way to lean leadership. McGraw-Hill.

➢ Michael L. George, Lean Six Sigma, McGraw-Hill, 2002.

➢ N. Goplakrishnan, Simplifed Lean Manufacture, PHI, 2010

➢ Ohno, T. (2012). Taiichi Ohnos Workplace Management: Special 100th Birthday Edition. McGraw Hill Professional.

➢ Ronald G.Askin and Jeffrey B.Goldberg, Design and Analysis of Lean Production Systems, John Wiley & Sons, 2003.

➢ Rother M. and hook J., Learning to See: Value Stream Mapping to add value and Eliminate Muda, Lean Enterprise Institute, Brookline, MA.

➢ Tapping, D., Luyster, T., & Shuker, T. (2002). Value stream management: Eight steps to planning, mapping, and sustaining lean improvements. Productivity Press.

➢ Womack, J. P., & Jones, D. T. (1997). Lean thinking—banish waste and create wealth in your corporation. Journal of the Operational Research Society, 48(11), 1148-1148.

Semester	Course Code	Course Title	Total Credits	Type Elective
3	BUS 3EOM 05	OPERATIONS STRATEGY	3	Elective-Operations

Introduction:

In today's competitive business environment, organizations need to optimize their operations to achieve sustainable success. Operations strategy plays a crucial role in this process by aligning operational decisions with overall business goals. This course provides a comprehensive introduction to operations strategy, covering key concepts, frameworks, and tools for making strategic decisions in the operations domain.

Course Objectives:

The following statement outlines the goals that the course aims to achieve:

To help the students gain a deep understanding of the key concepts, frameworks, and tools for formulating and implementing effective operations strategies in a dynamic and competitive business environment.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L3	Apply operations strategy frameworks to real-world scenarios and make informed decisions
2	L4	Analyze complex strategic decisions related to operations management
3	L5	Synthesize ethical considerations within operations strategy and propose ethical solutions
4	L4	Evaluate performance metrics comprehensively to improve operations
5	L6	Create innovative strategies to adapt to evolving challenges and industry trends

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	0	2	0	3	0
2	2	3	0	0	0
3	0	3	0	3	0
4	2	3	0	0	0
5	1	3	0	2	0

Module	Syllabus	Hours allotted
1	**Introduction to Operations Strategy:** Competitive Leverage - Industry Dynamics - Value Chain - Operations Excellence - Operations Strategy Matrix - Ethical Responsibility- Aligning with Business Strategy	9
2	**Operations Strategy Implementation:** Capacity Planning – Resource Management - Process Design & Development - Process management- Facility Location- Facilities Design - Capacity Flexibility - Performance Objectives- Performance Metrics – Cost implications and other Trade-offs.	9
3	**Managing Firm and Supply Chain:** Purchasing and Supply strategy- Global Supply Chain – Life Cycle Assessment (LCA) - Supply Chain Strategy – Supply Chain Architecture - - Sourcing Strategies - Cost Leadership – Strategic Partnerships (with a case study)	9
4	**Enabling the implementation of Strategy:** Role of a COO - Globalization Trends - HR and workforce management- - Outsourcing and Subcontracting – IT Implementation- Process Technology - Automation - Technology Adoption - Operations Control - Information Systems-DSS	9
5	**Addressing New Challenges**	9

	Risk management- Adapting to Challenges - Current Trends – Lean concepts - Flexibility - Business Resilience - Staying Competitive - Agility - Innovation – Sustainable Practices -AI and Future Challenges	
	Total	**45**

References:

➢ Lewis, M., & Slack, N. (2014). Operations strategy. Pearson Education.
➢ Beckman, Sara, and Donald Rosenfield. Operations Strategy: Competing in the 21st Century. McGraw-Hill/Irwin, 2007. ISBN: 9780072500783.
➢ Fine, Charles H. Clockspeed: Winning Industry Control in the Age of Temporary Advantage. Basic Books, 1999. ISBN: 9780738201535.

Semester	Course Code	Course Title	Total Credits	Type Elective
Sem 3	BUS 3EOM 06	**QUALITY MANAGEMENT**	3	**Elective - Operations**

Introduction:

Quality management is the process of ensuring that products and services meet or exceed customer expectations. It is a critical component of any business, as it can help to improve customer satisfaction, reduce costs, and increase market share. This course will provide a comprehensive introduction to the principles and practices of quality management. Students will learn about the different quality management models, tools, and techniques that can be used to improve the quality of products and services.

Course Objectives:

Upon successful completion of this course, students will be able to:

Define quality management and explain its role in business success
Identify and analyze the different quality management models
Apply quality management tools and techniques to real-world business scenarios

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L4	Apply operations strategy frameworks to real-world scenarios and make informed decisions
2	L3	Analyze complex strategic decisions related to operations management
3	L5	Synthesize ethical considerations within operations strategy and propose ethical solutions
4	L5	Evaluate performance metrics comprehensively to improve operations
5	L4	Analyse innovative strategies to adapt to evolving challenges and industry trends

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	0	2	0	3	0
2	2	3	0	0	0
3	0	3	0	2	0
4	2	3	0	0	0
5	0	3	0	2	0

References:

➢ Dale H.Besterfield, CarolBesterfield-Michna, Glen H. Besterfield, Mary Besterfield -Sacre, Hemant Urdhwareshe,Rashmi Urdhwareshe, Total Quality Management (TQM), Fifth edition, Pearson Education, 2018.
➢ Shridhara Bhat K, Total Quality Management – Text and Cases, Himalaya Publishing House, First Edition 2010
➢ PoornimaM.Charantimath, Total Quality Management, Pearson Education, Second Edition, 2011.
➢ Douglas C. Montgomory, Introduction to Statistical Quality Control, Wiley Student Edition4th Edition, Wiley India PvtLimited, 2008.
➢ Indian standard – quality management systems – Guidelines for performance improvement (Fifth Revision), Bureauof Indian standards, New Delhi.
➢ Panneerselvam.R, Sivasankaran. P, Quality Management, PHI Learning, 2014.

Module	Syllabus	Hours allotted
1	**Introduction:** Need for quality - Evolution of quality - Definition of quality. Concept of Quality –different perspectives. Concept of total Quality – Design, inputs, process and output - Attitude and involvement of top management. Customer Focus –Dimensions of product and service quality. Cost of quality.	8
2	**Quality Management Philosophies and Principles:** Quality Gurus - Crosby, Deming, Masaaki Imai, Feigenbaum, Ishikawa, Juran, Oakland, Shigeo Shingo, and Taguchi. Concepts of Quality circle, Japanese 5S principles and 8D methodology (with case study).	8
3	**Statistical Process Control:** Statistical Process Control (SPC) – Meaning, Significance. construction of control charts for variables and attributes. Process capability – meaning, significance and measurement. Six sigma- concepts of process capability. Reliability concepts – definitions, reliability in series and parallel, product life characteristics curve.	10
4	**Quality Tools and Techniques:** Quality Tools - The seven traditional tools of quality, New management tools. Six-sigma, Bench marking, Poka-yoke, Failure Mode Effect Analysis (FMEA) - Quality Function Deployment (QFD) – house of quality (with a case study). Taguchi - quality loss function, parameter and tolerance design, signal to noise ratio.	10
5	**Quality Management Systems:** Introduction Quality management systems - IS/ISO 9004:2000 - Quality System - Elements, Documentation guidelines for performance improvements. Quality Audits - QS 9000 – ISO 14000 – Concepts. TQM - culture, framework, benefits, awareness and obstacles.	9
	Total	**45**

Semester	Course Code	Course Title	Total Credits	Type Elective
4	BUS 4EOM 07	PROJECT MANAGEMENT	3	Elective- Operations

Introduction

This course provides a comprehensive overview of project management, covering topics from project appraisal and finance to agile methodologies and organizational behaviour. Students will gain a solid foundation in project management principles and practices, enabling them to effectively plan, execute, and control projects in diverse sectors and organizational settings.

Course Objectives:

Upon successful completion of this course, students will have a comprehensive understanding of project management principles and practices. They will gain the skills and knowledge necessary to initiate, plan, execute, control, and close projects effectively. Students will also learn how to manage project scope, schedule, costs, and risks. In addition, they will develop strong communication and team management skills. By the end of the course, students will be well-prepared to take on project management responsibilities in any organization

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels	Course Outcome
1	L5	Understand the fundamental concepts and principles of project management across various sectors and be able to analyse and evaluate project characteristics, life cycles, and appraisal methods.
2	L4	Apply both traditional project management techniques and Agile methodologies to plan, execute, and control projects effectively, considering project-specific requirements.
3	L4	Demonstrate leadership skills by effectively managing project teams, engaging stakeholders, resolving conflicts, and promoting a positive organizational culture.
4	L3	Develop proficiency in financial analysis and risk assessment, enabling informed decision-making to maximize project profitability and minimize risks throughout the project lifecycle.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	0	0	2	0
2	2	3	0	0	0

3	0	0	3	0	2
4	1	3	0	2	0

Module	Syllabus	Hours allotted
1	**Introduction to Project Management and Appraisal:** Overview - Characteristics - Project Life Cycle, Project Implementation, Feasibility studies, Systems Approach - Construction - Services Sector - Public Sector - Government Projects	9
2	**Project Finance, Control, and Advanced Management Techniques:** Cost Estimation - Financing - Net Present Value - Internal Rate of Return - Profitability Index - Cost of Capital - Risk Analysis -Project Planning Network Diagrams (with problem), Project implementation & closure	10
3	**The Fundamentals of Agile:** Agile Principles – Philosophy, Traditional Project Management versus Agile - Agile Manifesto - Values - Benefits - Challenges - History of Scrum - Scrum Roles	8
4	**Practical Implementation of Scrum and Agile in Organizations:** Implementing Scrum - Scrum Environment: Tools - Practices - Scrum Cycle: Product Backlog Refinement - Sprint Retrospective - Challenges - Pitfalls - Strategies - Agile Transition Case Study	9
5	**Organizational Behaviour in Project Management:** Organizational Structure - Integration - Project Manager Role - Project Team Roles - Stakeholder Engagement - Leadership - Participative Management - Team Building - Conflict Management - Stress Management. Case study	9
	Total	**45 Hours**

References

➢ Clegg, S. R., Skyttermoen, T., Vaagaasar, A. L. (2021). Project Management. Sage Publications, 1st edition.
➢ Pinto, J. K. (2020). Project Management. Pearson Education, 5th edition.
➢ Chandra, P. (2019). Projects, Planning, Analysis, Selection, Financing, Implementation and Review. Tata McGraw Hill, 9th edition.
➢ Gido, J., Clements, J., Baker, R. (2018). Mind Tap for Successful Project Management. Cengage Learning, 7th edition.
➢ Nicholas, J. M., Steyn, H. (2017). Project Management for Engineering, Business and Technology. Routledge, 5th edition.
➢ Nagarajan, K. (2017). Project Management. New Age International Publishers, 8th edition.
➢ Ries, E. (2011). The Lean Startup. Crown Business.
➢ Kanai, T. (2015). Agile Management for Value Creation in a Fragile World. CRC Press.
➢ Sutherland, J. (2014). Scrum: The Art of Doing Twice the Work in Half the Time. Crown Business.
➢ Gruver, G., & Mouser, T. (2015). Leading the Transformation: Applying Agile and DevOps Principles at Scale. IT Revolution Press

Semester	Course Code	Course Title	Total Credits	Type Elective
4	**BUS 4EOM 08**	**PRODUCT AND PROCESS DESIGN AND MANAGEMENT**	3 credits	**Elective-Operations**

Introduction:

This course provides a comprehensive introduction to the principles and practices of product and process design and management, covering the entire product lifecycle from ideation to launch and beyond. In today's competitive and ever-changing marketplace, the ability to design and manage innovative products and processes is essential for business success. The syllabus of this course will help the students to Apply design thinking principles to generate creative and innovative product ideas.

Course Objectives:

Upon successful completion of this course, students will be equipped with the knowledge and skills to effectively manage the entire product lifecycle, from ideation to launch and beyond. They will gain a deep understanding of design thinking principles, product development processes, process improvement methodologies, and the challenges and opportunities of product and process design and management in a global context.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L4	Apply design thinking to solve real-world product and process challenges effectively.
2	L3	Develop and Evaluate Innovation Strategies for product and process design.
3	L5	Assess Intellectual Property Implications in product development.
4	L5	Evaluate Product Lifecycle Management Strategies
5	L4	Analyze Process Improvement Methods

CO – PO Mapping:

CO Number	PO 1	PO2	PO 3	PO 4	PO 5
1	0	3	0	2	0
2	2	3	0	0	0
3	0	3	2	0	0
4	2	3	0	0	0
5	2	3	0	0	0

Module	Syllabus	Hours allotted
1	**Foundations of Product & Process Development:** Opportunity Identification - Market Research - Stakeholder Analysis - Need Assessment - Value proposition design - Process Value Mapping - Service Design- Design Specifications - Feedback Loops.	9
2	**Product Design Process:** Design Thinking - Empathy Mapping - Ideation Techniques - Morphological Analysis - SCAMPER - Iterative design and MVP- User-Centered Design - QFD - Concurrent Engineering - Prototype Development - Visual Storyboarding - High/Low-Fidelity Prototyping – Testing and Feedback.	9
3	**Process Design Tools and Techniques:** Process Flow Diagrams - BPMN Basics - BPMN Techniques - End-to-End Process Visualization - Swimlanes - Events - Tasks - Gateways - Sequence Flows - Process Value Mapping - Process Iteration- STEP Cycle	9
4	**Product Management:** Product Strategy and Vision - Go-to-Market Planning - Product-Market Fit - Product Portfolio Management - Intellectual Property - Product Road mapping - User Feedback and Iteration - Post-launch Product Evaluation- Product Lifecycle Management (PLM) with a Case Study.	9

5	**Innovation & Future of Process Design:** Continuous Improvement - Kaizen - Lean Methodology - Six Sigma - DMAIC - Innovation Management - Collaborative Design - IoT Integration - UXD - Future Outlook of Process and Product Design – (Project on sample product design and management process detailing)	9
	Total	**45**

References

➢ Mattson, C. A., & Sorensen, C. D. (2019). Product Development: Principles and Tools for Creating Desirable and Transferable Designs. Springer Nature

➢ Ulrich, K. T., Eppinger, S. D., & Yang, M. C. (2008). Product design and development. Boston: McGraw-Hill higher education

➢ Lewrick, M., Link, P., & Leifer, L. (2018). The design thinking playbook: Mindful digital transformation of teams, products, services, businesses and ecosystems. John Wiley & Sons.

➢ Aspelund, K. (2015). The design process (Vol. 25). Bloomsbury Publishing USA.

➢ Olsen, D. (2015). The lean product playbook: How to innovate with minimum viable products and rapid customer feedback. John Wiley & Sons.

➢ Dr.H.R.Thakkar & Dr.M.A.Bulsara. Product Design and Value Engineering

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Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 4	BUS 4EOM 09	INTERNATIONAL LOGISTICS	3	Elective - Operations

Introduction:

This course provides a comprehensive overview of various aspects of international logistics, addressing foundational concepts, contractual aspects, integration with the supply chain, transport systems, and the economic dimensions of international logistics. Each module allows for in-depth study and understanding of the different facets of international logistics for the MBA program.

Course Objectives:

The objectives of this course are to develop a proactive approach to problem-solving in international logistics operations and help the students exhibit effective communication and teamwork skills in a multicultural setting.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Describe the complexities of global trade flows and the role of international logistics in managing these flows.
2	L5	Evaluate different types of export sales contracts and their implications in the context of global supply chain management.
3	L6	Develop strategies to integrate international logistics with supply chain operations while considering various trade-offs and modal characteristics.
4	L5	Critically assess the significance of various transportation modes in the global context and evaluate their impact on international trade.
5	L6	Create comprehensive cost-benefit analyses for international logistics operations and develop strategies to ensure economic efficiency in global transportation systems.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	2	0	0	3	0
2	3	0	0	2	0
3	0	2	0	3	0
4	0	3	0	2	0
5	0	3	0	2	0

Module	Syllabus	Hours allotted
1	**Foundation Concepts in International Logistics:** Managing the Supply Pipeline for Global Trade Flows- The Global Logistics Operators- Comparison between National (Domestic) and International Logistics- International Transport and Globalization- Factors Driving Global Supply Chain Management- Customs and Global Supply Chain Management	9
2	**Export Sales Contract in International Logistics** Constituents of the Export Sales Contract- Contract of Affreightment: Terms of Delivery & Incoterms standards- International Purchasing Systems- Strategy and its Interface with the Management of the Global Supply Chain- Negotiating the Contract- Selecting the International Logistics Operator- Criteria of Selecting the Third-Party Logistics Operator	9
3	**Integrating International Logistics with Supply Chain:** Trade-Offs in International Logistics- Multi-Modalism and Key Factors in a Transport Mode(s)- Considerations of Speed, Frequency, Packing, and Insurance in International Transportation- Warehousing & Benchmarking in Global Supply Chain Management- Supply Chain Cycle Time Reduction- Demand-Driven Supply Network in International Logistics- Case Studies and Latest Updates	10
4	**International Transport Systems:**	8

	Introduction to International Transport System and Basic Terms-Significance of Transportation Services- Characteristics of Modes of Transport (Road, Rail, Maritime, Air)- Intermodal Transportation- Technical performance & Transport Economic Indicators-Case Studies and Latest Updates	
5	**Cost and Economy of International Logistics:** International Transport and Economic Development- Transportation and Commercial Geography- International Transport Costs- International Transport Supply and Demand- Location Analysis and Market Area Analysis- The Nature of International Transport Policy- International Transport Planning- International Transport Safety and Security- Traffic Counts and Traffic Surveys- Cost / Benefit Analysis- Case Studies and Latest Updates	9
	Total	**45**

References:

- Sak Onkvisit& John J. Shaw. International Marketing. Prentice Hall of India (1996).
- B Bhattacharyya and R L Varshing. International Marketing. Sultan Chand and Sons (2015).
- Multiah Krishnaveni. Logistic Management and World Sea Borne Trade. Himalaya Publication (2011).
- Donald J. Bowerson. Logistic and Supply Chain Management. Prentice Hall of India (2018).
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  - Jean-Paul Rodrigue, Claude Comtois and Brian Slack. The Geography Of Transport Systems (2009), New York: Routledge.
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  - Raghuram. G, Asopa, V.N: Shipping Management: Cases and Concepts, Macmillan, New Delhi, (1998).
  - Lambert, D et al: Strategic Logistic Management, McGraw Hill, New Delhi, (2001).
  - Morlok, Edward K. The Freight Transportation System. Excerpted from CRC Mechanical Engineering
Hand Book.
  - LaLonde, Bernard J. Intermodal Freight Requirements. TR News 192, 10. DeGarmo, E. Paul, et.al. Engineering Economy, 8th Edition, Macmillan.

Semester	Course Code	Course Title	Total Credits	Type Elective
Sem 4	BUS 4EOM 10	**WORLD-CLASS MANUFACTURING**	3	Elective - Operations

Introduction:

Manufacturing companies face constant pressure to improve efficiency, quality, and customer satisfaction, in today's competitive world. World Class Manufacturing (WCM) is a comprehensive approach to achieving excellence in manufacturing operations. This course introduces the key principles, practices, and tools of WCM, equipping students with the knowledge and skills to transform their manufacturing operations into world-class contenders.

Course Objectives:

Upon successful completion of this course, students will have a comprehensive understanding of World Class Manufacturing (WCM) principles, practices, and tools. They will be able to identify, analyze, and implement WCM strategies to achieve operational excellence in manufacturing environments. Students will develop the skills to design and implement effective WCM systems, including waste elimination initiatives, total quality management techniques, and continuous improvement programs. They will also learn how to measure and monitor WCM performance, manage cultural change, and adapt to changing business and technological landscapes. By the end of the course, students will be well-equipped to contribute to the transformation of any manufacturing organization into a world-class competitor.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcomes
1	L4	Analyze the evolution and impact of World Class Manufacturing on global competitiveness and performance measures.
2	L3	Apply the concepts of value-added manufacturing, lean thinking, and the Theory of Constraints to optimize production processes and eliminate waste.
3	L5	Assess the role of human resource management in facilitating organizational learning and total employee involvement for continuous improvement in manufacturing.
4	L5	Evaluate the effectiveness of various tools and systems, such as Lean Production, Six Sigma, and Total Productive Maintenance, in achieving World Class Manufacturing standards and continuous improvement

5	L4	Contrast the differences between conventional industries and those implementing World Class Manufacturing practices.	

CO – PO Mapping:

CO Number	PO1	PO2	PO3	PO4	PO5
1	2	0	0	3	0
2	3	2	0	0	0
3	3	0	0	0	2
4	0	3	0	3	0
5	3	2	0	0	0

Module	Syllabus	Hours allotted
1	**Evolution of World Class Manufacturing**: World class organizations, competing in world markets, competitiveness and performance measures, factors affecting competitiveness, world class manufacturing and the information age, Manufacturing challenges of the information age- Models for Manufacturing excellence: Schonberger, Halls, Gunn & Maskell models and Business Excellence.	**10**
2	**Benchmark and Best Practices:** Concepts of Benchmarking, bottleneck and best practices, best performers, gaining competitive edge through world class manufacturing- Value added manufacturing, Value stream mapping, Eliminating different types of waste- Lean Thinking (Toyota Production System), Theory of Constraints, Case Studies	**9**
3	**Human Resource Management in WCM:** Adding value to the organization - Organizational learning, Root cause analysis techniques- Cross functional teams - People as problem solvers - Total Employee involvement - Morale and Teamwork -Human Integration movement- The Balanced Score Card. Associates:	**8**

	Facilitators, Teamsmanship, Motivation and reward in the age of continuous improvement, Case Studies and Latest Updates.	
4	**System & Tools for World Class Manufacturing**: Improving Product & Process Design - Lean Production, FMS, Rapid Prototyping, Poka Yoke, 5-S, 7 M, JIT, Product Mix Optimizing, Procurement & Stores practices- Six Sigma philosophy, Design of Six Sigma-DMAIC, DMADV. Total Productive maintenance and Visual Control, Case Studies and Latest Updates.	8
5	**Typical Characteristics of World Class Manufacturing Companies:** International Scenario and Indian Scenario, Manufacturing Innovations, Quick Response Manufacturing, Agile manufacturing, lean manufacturing, concurrent engineering, Globalization and World Class Manufacturing - Generic Manufacturing Strategies for Information Age -Strategic Planning Methodology for WCM, Issues in Strategic Planning of WCM- Performance Measurement: POP System, TOPP System and Ambite Systems	10
	Total	**45**

References:

➢ Sahay, B.S., Saxena, K.B.C and Ashish Kumar, (2018). World Class Manufacturing – A Strategic Perspective, Laxmi Publications.

➢ Narayanan V. K, Managing Technology & Innovation for Competitive Advantage, Prentice Hall, 2014.

➢ Nair, N.G, (2002). Production & Operations Management, McGraw Hill Education (India) Private Limited.

➢ Richard J. Schonberger (2010). World Class Manufacturing: The Next Decade: Building Power, Strength, and Value, Free Press.

➢ Chary S. N., (2019). Production & Operations Management, McGraw Hill Education India Private Limited.

➢ Ron Moore (2013). Making Common Sense Common Practice – Models for manufacturing Excellence (Kindle edition), Reliabilityweb.com.

➢ Korgaonkar M. G., (2012). Just In Time Manufacturing, MacMillan Publishers India.

➢ Jeffrey K.Liker (2004). The Toyota Way – 14 Management Principles, Mc-Graw Hill.

➢ Everett E. Adam, Ronald J. Ebert (1992). Production and Operational Management, Prentice Hall learning Pvt. Ltd. 5th Edition.

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
3	BUS 3EB 01	PYTHON PROGRAMMING FOR DATA SCIENCE	3	Elective-Business Analytics

Introduction:
This course will introduce the learner to the basics of the python programming environment, including fundamental python programming techniques such as lambdas, reading and manipulating csv files, and the numpy library. The course will introduce data manipulation and cleaning techniques using the popular python pandas data science library and introduce the abstraction of the Series and Data frame as the central data structures for data analysis, along with tutorials on how to use functions such as group by, merge, and pivot tables effectively. By the end of this course, students will be able to take tabular data, clean it, manipulate it, and run basic inferential statistical analyses.

Course Objectives:
The course "Python Programming for Data Science" is designed to achieve several overarching objectives. Firstly, it aims to provide students with a solid foundational understanding of Python programming, encompassing essential concepts and techniques necessary for data science. Students will gain proficiency in data manipulation and cleansing through the use of Python's Pandas library, with a focus on Series and Dataframe data structures. The course further emphasizes the acquisition of skills in the analysis of tabular data, including cleaning, transformation, and inferential statistical analysis. By the conclusion of the course, students will be equipped with the expertise to navigate Python effectively in the context of data science, enabling them to tackle real-world data-related challenges.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels	Course Outcome
1	L2	Explain various Python data structures to effectively manage various types of data.
2	L3	Explore various steps of data science pipeline with role of Python.
3	L4	Analyse and use various data visualization tools for effective interpretations and insights of data.
4	L6	Perform data Wrangling with Scikit-learn applying exploratory data analysis.
5	L6	Design applications applying various operations for data cleansing and transformation.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	2	3	0	0	0
2	2	3	0	0	0
3	2	3	0	0	0
4	2	3	0	0	0
5	2	3	0	0	0

Module	Syllabus	Hours allotted
1	**Overview of Python and Data Structures**: Basics of Python including data types, variables, expressions, objects and functions. Python data structures including String, Array, List, Tuple, Set, Dictionary and operations them.	9
2	**Python programming constructs**: Expression, operation and design structure. Boolean expressions and logical operators, conditional and alternative execution, chained and nested execution-Iterative execution.	9
3	**Getting Your Hands Dirty With Data**: Using the Jupyter Console, Interacting with screen text, Changing the window appearance, Getting Python help, Getting IPython help, Using magic functions, Discovering objects, Using Jupyter Notebook, Working with styles, Restarting the kernel, Restoring a checkpoint, Performing Multimedia and Graphic Integration, Embedding plots and other images, Loading examples from online sites, Obtaining online graphics and multimedia.	10

4	**Data Visulization**: Visualizing Information: Starting with a Graph, Defining the plot, drawing multiple lines and plots, saving your work to disk, Setting the Axis, Ticks, Grids, Getting the axes, Formatting the axes, adding grids, Defining the Line Appearance, working with line style, using colors, adding markers, Using Labels, Annotations, and Legends, adding labels, Annotating the chart, Creating a legend. Visualizing the Data: Choosing the Right Graph, showing parts of a whole with pie charts, creating comparisons with bar charts, showing distributions using histograms.	9
5	**Data Wrangling:** Wrangling Data: Playing with Scikit-learn, understanding classes in Scikit-learn, defining applications for data science, Performing the Hashing Trick, using hash functions, Demonstrating the hashing trick, working with deterministic selection, Considering Timing and Performance, working with the memory profiler, Running in Parallel on Multiple Cores, performing multicore parallelism, Demonstrating multiprocessing. Exploring Data Analysis: The EDA Approach, Defining Descriptive Statistics for Numeric Data, measuring central tendency, measuring variance and range, working with percentiles, defining measures of normality, Counting for Categorical Data.	8
	Total	**45**

References:
- ➢ John Paul Mueller, Luca Massaron, Python for data science for dummies, Wiley
- ➢ M. T. Savaliya, R. K. Maurya, G. M. Magar, Programming through Python, STAREDU Solutions
- ➢ Daniel Y. Chen, Pandas for everyone: Python Data Analysis, Pearson
- ➢ Alex Galea, Applied Data Science with Python and Jupyte, Packt
- ➢ Anil Maheshwari, Data Analytics Paperback, McGrawHill

Semester	Course Code	Course Title	Total Credits	Type
				Elective
Sem 3	BUS 3EB 02	ADVANCED STATISTICAL MEASURES USING SPSS	3	Elective – Business Analytics

Introduction:

In today's data-driven world, statistical analysis plays a pivotal role in solving complex problems, making informed decisions, and driving innovation. The ability to work with advanced statistical measures is a valuable skill, and this course is your gateway to mastering them. The students will learn to leverage SPSS to conduct a wide range of statistical analyses, from descriptive statistics to inferential tests, regression analysis, and much more.

Course Objectives:

The objectives of the course "Advanced Statistical Measures using SPSS" are multifaceted. First and foremost, this course aims to deepen your understanding of advanced statistical concepts, including hypothesis testing, multivariate analysis, and non-parametric tests. You will learn to harness the capabilities of IBM SPSS Statistics software to perform a wide range of complex statistical analyses effectively. Additionally, the course focuses on honing your ability to interpret and communicate the results of these analyses to various stakeholders. By the end of the course, you will be proficient in utilizing SPSS for advanced statistical measures, enabling you to make data-informed decisions, conduct meaningful research, and contribute to data-driven strategies across various domains.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L4	Create various data visualizations, including bar charts, histograms, scatter plots, and frequency distributions, to effectively present and analyze data.

2		Analyze nonparametric and parametric statistical tests, based on data characteristics, to make informed decisions in hypothesis testing.
	L4	
3		Apply logistic regression models and applying them using SPSS, enabling them to make predictions and classifications in real- world scenarios.
	L3	

| 4 | L4 | Apply cluster analysis, enabling them to evaluate and interpret clusters generated through hierarchical or k-means clustering, providing insights into data patterns and groupings. |
| 5 | L5 | Prepare data for data mining in SPSS, applying association rule mining and decision trees, and effectively reporting and interpreting results, facilitating data-driven decision-making in various applications |

CO – PO Mapping:

CO Number	PO1	PO2	PO3	PO4	PO5
1	2	3	0	0	0
2	0	3	0	2	0
3	0	3	0	2	0
4	0	3	0	2	0
5	0	3	0	2	0

Module	Syllabus	Hours Allotted
1	**Introduction to SPSS**: Overview of SPSS software and its capabilities; Setting up and configuring SPSS on various platforms; Data Preparation and Data Types: Importance of data quality in statistical analysis; Data entry methods (manual entry, importing data); Data types: nominal, ordinal, interval, and ratio; Labeling variables and values; Data Cleaning and Transformation: Identifying and handling missing data (imputation, removal);	8
2	**Inferential Statistics and Hypothesis Testing** Hypothesis Testing: Formulating null and alternative hypotheses; One-sample and two-sample t-tests (independent and paired); Chi-squared tests for independence and goodness-of-fit; Analysis of Variance (ANOVA): One-way ANOVA and its applications; Two-way ANOVA with interaction effects; Post-hoc tests (Tukey's, Bonferroni, etc.); Nonparametric Tests: Wilcoxon signed-rank test; Mann-Whitney U test; Kruskal-Wallis test; When to use nonparametric tests vs. parametric tests	10
3	**Regression:** Simple Linear Regression: Introduction to regression analysis; Assumptions and limitations of linear regression; Model building and interpretation; Using SPSS for simple linear regression; Multiple Regression: Multiple regression analysis and its applications; Logistic Regression: Introduction to logistic regression; Binary logistic regression vs. multinomial logistic regression;	10

4	**Advanced Topics in SPSS:** Factor Analysis: Introduction to factor analysis; Exploratory vs. confirmatory factor analysis; Factor extraction methods (PCA, EFA); Interpreting factor loadings with SPSS; Cluster Analysis: Overview of cluster analysis; Hierarchical vs. k-means clustering; Evaluating and interpreting clusters; Cluster analysis in SPSS;	10
5	**Data Mining with SPSS**: Preparing data for data mining; Association rule mining and its applications; Decision trees and classification algorithms; Applying data mining techniques in SPSS Modeler; Reporting and Interpretation	7
	Total	**45**

References:

➢ Paul Newbold, William L. Carlson, and Betty Thorne. Statistics for Business and Economics.
➢ David G. Kleinbaum, Lawrence L. Kupper, and Keith E. Muller. Applied Regression Analysis and Other Multivariable Methods.
➢ Jeremy J. Foster. Data Analysis Using SPSS for Windows - A Beginner's Guide.
➢ Julie Pallant. SPSS Survival Manual.

Semester	Course Code	Course Title	Total Credits	Type- Elective
3	BUS 3EB 03	HR ANALYTICS	3	Elective -HRM

Introduction/course summary:

The course aims to equip students to solve HR-related problems by providing an in-depth understanding of the concepts related to HR Analytics and to familiarize them with the current trends in the field.

Course Objectives:

The primary objectives of the HR Analytics course are to equip students with a comprehensive understanding of the principles, methodologies, and tools employed in Human Resources analytics. This course aims to foster an appreciation for the strategic role of data-driven decision-making within the realm of human capital management. Participants will explore key concepts such as workforce planning, talent acquisition, employee performance, and retention analysis. The course seeks to develop conceptual proficiency in leveraging statistical techniques and analytics to extract meaningful insights from HR data.

Course Outcomes

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels	Course Outcome
1	L2	Describe the evolution to data driven decision making in HRM
2	L6	Construct HR dashboards using metrics important for different HR functions
3	L3	Apply concepts and techniques for improving recruitment and selection
4	L3	Apply concepts and techniques for improving talent management decisions
5	L5	Apply latest trends in AI and analytics for improving HR decision making

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	2	3	0	0	0
2	0	0	0	3	2
3	0	2	0	0	3
4	0	3	0	0	2
5	2	3	0	0	0

Module	Syllabus	Hours allotted
1	**Introduction to Business Analytics and Rise of Human Resource (HR) Analytics:** Introduction to data driven decision making; HR analytics framework – PCMM, LAMP; Four levels of HR Analytics; Implementing HR Analytics; Sources of HR data; Meaning and pitfalls of HR Analytics.	**9**
2	**HR Metrics and creating HR Dashboards:** Forecasting HR demand and supply; Talent Development and Reporting Principles (TDRP) and Chartered Institute of Personnel development (CIPD). Types of HR Metrics: Staffing Metrics, Training and Development Metrics, Engagement metrics. Benchmarking; Creating HR dashboards.	**9**
3	**Recruitment and selection analytics:** Introduction to ATS, Recruitment Efficiency; Workforce planning and talent sourcing. Building an inclusive work place; Identifying and dealing with bias in AI Evaluating reliability and validity of models; Optimizing selection and promotion decisions.	**9**
4	**Talent management analytics:** Performance management; Predicting performance and turnover; Cost cutting and lay-off analysis. Training and development analytics; Evaluating training and development. Compensation management; Employee retention and engagement analytics.	**9**
5	**Trends in HR analytics:** Qualitative methods of analysis; Scope of Big data, Machine learning, and Artificial Intelligence in HRM; Employee gamification – application and analysis; Reflection on HR analytics – ethics and limitations.	**9**
	Total	**45**

References:

➢ Bhattacharya, Dipak Kumar, HR Analytics- Understanding Theories and Applications, Sage Texts, India, 2017.

➢ Pratyush, Banerjee; Jatin Pandey; Manish Gupta. Practical Applications of HR Analytics, Sage. Texts, India, 2019.

➢ Ramesh, Soundarajan and Kuldeep Singh, Winning on HR Analytics Leveraging Data for Competitive Advantage Sage Publication India Pvt. Ltd. 2016.

Semester	Course Code	Course Title	Total Credits	Type - Elective
Sem 3	BUS 3EB 04	**MARKETING ANALYTICS**	3	**Elective – Marketing / Business Analytics**

Introduction:

With a strong focus on real-world applications, the Marketing Analytics course will help the students to gain the skills and knowledge necessary to measure and enhance the effectiveness of marketing efforts, improving ROI and driving business growth.

Course Objectives:

The course on "Marketing Analytics" is designed to achieve several fundamental objectives. Firstly, it aims to equip participants with a comprehensive understanding of the principles and methodologies of marketing analytics. Through this course, individuals will develop proficiency in data collection, analysis, and interpretation, enabling them to measure and optimize marketing strategies effectively. Furthermore, it seeks to cultivate the ability to leverage analytics tools and techniques to enhance marketing decision-making, customer segmentation, and campaign performance. Ethical considerations in handling consumer data and privacy issues are also emphasized. Ultimately, this course strives to prepare marketing professionals to navigate the complex data-driven marketing landscape, empowering them to craft data-informed strategies and contribute to the overall success and competitiveness of their organizations.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Comprehend and articulate the core principles and concepts of marketing analytics for use in marketing decision-making.
2	L3	Apply data analysis techniques to effectively explore, present and interpret marketing metrics for practical decision-making.

3	L4	Analyse customer behaviour and preferences using advanced data analysis methods enabling organizations to make well- informed decisions.

4	L5	Synthesize and evaluate marketing strategies using analytics to create and optimize marketing campaigns, and to make data- driven decisions.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	2	0	0	0
2	2	3	0	0	0
3	2	3	0	0	0
4	2	3	0	0	0

Module	CONTENT	Hours Allotted
1	**Introduction to Marketing Analytics** Definition, relevance, and importance of marketing analytics in the digital age; Marketing analytics process: Data collection and preparation for market analytics; Marketing Metrics: Key performance indicators in marketing; Metrics for measuring customer acquisition, retention, and churn; ROI calculations; Introduction to marketing analytics tools (e.g., Google Analytics, HubSpot)	9
2	**Data Analysis Techniques** Descriptive Analytics: Data exploration and summary statistics; Data visualization techniques; Customer segmentation and profiling; Data Analysis Techniques, Classification models for customer segmentation; Time series analysis for trend prediction.	12
3	**Customer Insights and Behaviour Analysis** Customer Lifetime Value: Understanding CLV and its importance; Calculating CLV using different methods; Using CLV for customer segmentation; Customer Journey Mapping: Customer Insights and Behaviour Analysis, Mapping the customer journey; Touchpoint analysis and customer touchpoint optimization	10
4	**Marketing Strategy and Decision-Making** Marketing Mix Optimization: Marketing Strategy and Decision Making, Marketing Strategy and Decision Making, optimizing marketing mix strategies using data; Customer acquisition and retention Strategies: Marketing Strategy and Decision Making, Strategies for customer retention and loyalty.	8

5	**Personalisation & Ethics** Personalization and Recommendation Systems: Implementing recommendation systems; Marketing Analytics Ethics and Privacy; Ethical considerations in marketing analytics.	6
	Total	**45**

References:

➢ Blanchard, O. (2011). Social Media ROI: Managing and Measuring Social Media Efforts in Your Organization. Que Publishing.
➢ Farris, P., Bendle, N. T., Rust, R. T., Quelch, J. A., & Schmittlein, D. C. (2010). Marketing Metrics: The Definitive Guide to Measuring Marketing Performance. FT Press.
➢ Hemann, C., & Burbary, K. (2012). Digital Marketing Analytics: Making sense of Consumer data in a digital world. Pearson Education.
➢ Provost, F., & Fawcett, T. (2013). Data science for business: What you need to know about data mining and data-analytic thinking. O'Reilly Media.
➢ Siegel, E. (2013). Predictive analytics: The power to predict who will click, buy, lie, or die. Wiley.
➢ Watson, R. T. (2013). Ethical data and information management: Concepts, tools, and methods. CRC Press.
➢ Winston, W. L. (2014). Marketing analytics: Data-driven techniques with Microsoft Excel. Pearson Education

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 3	**BUS 3EB 05**	**FINANCIAL ANALYTICS**	**3**	**Elective - Business Analytics**

Introduction:

Financial Analytics is a comprehensive and pivotal course within the realm of modern finance, designed to equip students with a profound understanding of the quantitative techniques and analytical tools essential for making informed financial decisions. This course delves into the intricate world of financial data analysis, risk management, and investment strategies, providing students with the skills and knowledge necessary to navigate the complexities of contemporary financial markets. With a focus on empirical analysis and the application of statistical methods, Financial Analytics empowers individuals to evaluate, forecast, and optimize financial outcomes, fostering a critical skill set highly sought after in today's competitive financial landscape.

Course Objectives:

The objectives of the course "Financial Analytics" are as follows:

- Comprehensive Understanding: To provide students with a comprehensive understanding of financial analytics, encompassing key principles, methodologies, and techniques in the field.
- Quantitative Competence: To develop students' quantitative and analytical skills, enabling them to interpret and analyze financial data effectively.
- Risk Assessment: To equip students with the ability to assess and manage financial risks through the application of statistical tools and models.
- Investment Decision-Making: To enable students to make informed investment decisions based on data-driven insights, considering factors such as portfolio optimization and asset allocation.
- Financial Modeling: To introduce students to financial modeling techniques, enabling them to construct and evaluate financial models for various scenarios.

Course Outcomes:
By the end of the course, the student will be able to…

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Comprehend the fundamental principles and concepts of financial analytics, including financial data sources, statement analysis, and risk management

2	L3	Apply financial analytics techniques to analyse real-world financial data, conduct financial statement analysis, and make informed business decisions based on the results.
3	L4	Analyze complex financial scenarios by employing advanced financial modelling and forecasting techniques, and critically evaluate the outcomes to provide insights for strategic financial planning.
4	L5	Create innovative financial analytics solutions to solve financial challenges, and critically evaluating the effectiveness of these solutions in real-world financial contexts.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	2	3	0	0	0
2	0	3	0	2	0
3	2	3	0	0	0
4	0	3	0	2	0

Module	Syllabus	Hours allotted
1	**Introduction to Financial Analytics:** Definition, its importance in digital age; The importance and application in business; Types of financial analytics; Financial data sources, collection and tools; Data cleaning and preparation; Exploratory data analysis; Financial modelling and forecasting; Case studies	9
2	**Financial Statement Analysis:**Types and tools of financial statement analysis, its importance in business decision-making; Common-size statements; Comparative statement analysis; Financial Ratios: types, interpretation, Du Pont analysis; Trend analysis; Fund Flow statement analysis; Cash flow analysis: types, interpretation; Case studies	9
3	**Financial Markets & Risk Management Analytics:** Markets: Equity markets, Bond markets, Derivative markets; Analysis: Technical analysis, Fundamental analysis; Types of risk: Financial risk, Market risk, Credit risk, Operational risk; Risk assessment, Risk management strategies; Quantitative risk analysis; Value at risk (VaR); Credit risk analysis; Financial	9

	analytics for investment decisions, credit scoring, fraud detection, and regulatory compliance; Case studies	
4	**Financial Forecasting and Modelling:** Time series analysis; Regression analysis; Financial forecasting models; Introduction to financial modelling; Types of financial models; Building a financial model; Case studies	**9**
5	**Machine Learning for Financial Analytics:** Introduction to machine learning; Supervised learning, and Unsupervised learning; Machine learning algorithms; Text mining; Case studies	**9**
	Total	**45**

(50% Theory and 50% Problems)

References:

➢ DePamphilis, D. Financial analytics for dummies. Hoboken, NJ: Wiley.
➢ Inmon, W. H. Financial analytics: A new generation of tools and techniques for solving real-world problems. Indianapolis, IN: Wiley.
➢ Lopez de Prado, M. Machine learning for finance. Hoboken, NJ: Wiley.
➢ Makridakis, S., Wheelwright, S. C., & Hyndman, R. J. Financial forecasting: Theory and practice. Hoboken, NJ: Wiley.
➢ Penman, S. H. Financial analytics: Methods and applications. Cambridge, MA: MIT Press.
➢ Sanvito, S. Deep learning for finance: Theory and practice. Cambridge, UK: Cambridge University Press

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 3	BUS3EB06	ARTIFICIAL INTELLIGENCE & MACHINE LEARNING	3	Elective – Business Analytics

Introduction:

In today's digital age, AI and ML are at the forefront of technological innovation, influencing how businesses operate and shaping the future of various industries. This course serves as a gateway to this dynamic world, providing a deep understanding of AI and ML principles and practical skills. By delving into the course, the students will gain the tools and knowledge needed to harness the power of intelligent algorithms, enabling them to solve complex problems, automate tasks, and drive innovation across diverse sectors.

Course Objectives:

The course "Artificial Intelligence & Machine Learning" is designed to achieve several key objectives. First, it aims to provide a comprehensive understanding of the fundamental principles and concepts that underlie artificial intelligence and machine learning. Students will gain hands-on experience with cutting-edge tools and techniques, enabling them to build and deploy machine learning models. The course also emphasizes the practical application of AI and ML across various domains, from healthcare to finance, fostering the ability to identify opportunities for AI integration. Ultimately, the course seeks to equip participants with the skills and knowledge required to leverage AI and ML effectively, fostering innovation, problem-solving, and data-driven decision-making in the rapidly evolving landscape of technology and business.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Discuss the fundamental concepts and techniques in Artificial Intelligence and Machine Learning.

2	L3	Apply basic Python programming skills for AI and ML.
3	L4	Analyse and critically evaluate the performance of machine learning models and AI techniques.
4	L6	Innovate, contribute, and adapt to new technologies and systems in the field of AI and ML

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	1	0	0	0
2	2	3	0	0	0
3	2	3	0	0	0
4	0	3	0	2	0

Module	Syllabus	Hours allotted
1	**Foundations of AI & ML:** Introduction to Artificial Intelligence and Machine Learning; Basic concepts and techniques in AI and ML; Real- world applications and case studies	7
2	**Python for AI & ML:** Basics of Python programming; Introduction to Jupyter Notebook; Functions and control structures; Packages and libraries relevant to AI & ML; Data structures, arrays, vectors, and data frames in Python; Hands- on exercises and coding practice	**14**
3	**Applied Statistics:** Descriptive statistics: Measures of central tendency and variability; Inferential statistics: Sampling, confidence intervals, and hypothesis testing; Probability theory and its role in AI & ML	**8**
4	**Machine Learning:** Fundamentals of various learning methods and techniques; Supervised Learning: Regression, classification, and support vector machines; Unsupervised Learning: Clustering and Dimensionality Reduction; Ensemble Techniques: Decision trees, random forests, bagging, and boosting; Feature engineering, model selection, and tuning; Model performance evaluation and regularization techniques	**8**
5	**NLP and SQL:** Understanding NLP (Natural Language Processing); Introduction to ChatGPT and Generative AI; Exploring applications of ChatGPT and OpenAI technologies; Basics of Database Management	**8**

	Systems (DBMS); Database normalization and its importance; SQL	

	operations: Joins, sorting, set operations, grouping, and filtering; Case studies and real-world examples	
	Total	**45**

References:

➢ Alpaydın, E. (2014). Machine learning: A probabilistic perspective. MIT press.
➢ Eddison, L. (2023). Python machine learning: A technical approach to machine learning for beginners. Apress.
➢ Geron, A. (2019). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow: Concepts, Tools, and Techniques to Build Intelligent Systems. O'Reilly Media.
➢ Russell, S., & Norvig, P. (1995). Artificial intelligence: A modern approach (2nd ed.) Prentice Hall.
➢ Shalev-Shwartz, S., & Ben-David, S. (2014). Understanding Machine Learning. Cambridge University Press.
➢ Tegmark, M. (2017). Life 3.0: Being Human In The Age Of Artificial Intelligence. Vintage.
➢ Yao, M. (2019). Applied Artificial Intelligence: A Handbook For Business Leaders: A Non- Technical Introduction. Geron

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 4	BUS 4EB 07	BIG DATA AND CLOUD COMPUTING	3	Elective – Business Analytics

Introduction:

In today's data-driven world, organizations are inundated with vast amounts of data, and the ability to harness this data for insights and innovation is paramount. This course is the gateway to understanding and leveraging the convergence of Big Data and Cloud Computing technologies.

Course Objectives:

The course on "Big Data and Cloud Computing" is designed to achieve several key objectives. First, it aims to provide a comprehensive understanding of Big Data concepts, including data storage, processing, and analytics at scale. Participants will learn the principles and technologies behind Cloud Computing and its role in enabling scalable and cost-effective Big Data solutions. Additionally, this course seeks to equip students with hands-on experience, enabling them to design and implement Big Data solutions in a cloud environment. Beyond technical skills, the course also emphasizes the importance of data security, privacy, and ethical considerations in handling large datasets. Ultimately, the course aims to prepare individuals to harness Big Data and Cloud Computing effectively, making data-informed decisions and contributing to the digital transformation of organizations across various industries.

Course Outcomes:

By the end of the course, the student will be able to.

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Describe the basic terminologies in big data and cloud computing
2	L3	Discuss how data processing and storage occurs
3	L4	Evaluate the storage capacity and resource capability
4	L5	Integrate different service providers and their concepts and create account in different services
5	L6	Build solution for different services and storage requirement

CO – PO Mapping:

CO Number		PO 1	PO 2	PO 3	PO 4	PO 5
	1	3	2	0	0	0
	2	3	2	0	0	0
	3	3	2	0	0	0
	4	2	3	0	0	0
	5	2	3	0	0	1

Module	Syllabus	Hours allotted
1	**Big data:** why big data, convergence of key trends, unstructured data, industry examples of big data. big data and marketing, fraud and big data, risk and big data, credit risk management, big data and algorithmic trading, advertising and big data, introduction to Hadoop, open source technologies.	7
2	**Introduction to streamed, structured and unstructured data**: Storage of unstructured data Introduction to NoSQL, aggregate data models, aggregates, key-value and document data models, relationships, graph databases, schema less databases Materialized views, distribution models, sharding, master-slave replication, peer-peer replication, sharding and replication.	10
3	**Cloud Computing** Historical Developments, Building Cloud Computing Environments, Computing Platforms and Technologies, Introduction to Cloud Computing, System Models for Distributed and Cloud Computing-Software Environments for Distributed Systems and Clouds – Cloud Computing and Service Models – Public – Private – Hybrid Clouds	10
4	**Infrastructure-as-a-Service (IaaS)** – Platform-as-a Service (PaaS) - Software-as-a-Service (SaaS)- Different Service Providers, Data Analytics as a Service Introduction to Public and Private Clouds, Shared Resources – Cloud data storage – Cloud TM Virtualisation: Introduction, Characteristics of Virtualised Environments, Virtualisation and Cloud Computing, Pros and Cons of Virtualisation	10

5	**Architectural Design of Compute and Storage Clouds** – Public Cloud Platforms: GCP - AWS – Azure; Introduction to AWS, AWS Global Infrastructure, Create AWS Account, quick tour of AWS Console, AWS Services Overview, AWS Compute Services, AWS Storage Services, AWS Database Services, sample AWS architecture.	8
	Total	**45**

References:

➢ Michael Minelli, Michelle Chambers, and Ambiga Dhiraj.Big Data, Big Analytics: Emerging Business intelligence and Analytic trends for Today's Business, , John Wiley & Sons, 2013

➢ Raj Kamal, Preeti Saxena. Big Data Analytics, Introduction to Hadoop, Spark, and Machine-Learning. McGraw Hill, 2018.

➢ George Reese, "Cloud Application Architectures: Building Applications and Infrastructure in the Cloud (Theory in Practice)", O'Reilly Publications, 2009

➢ Bill Franks. The analytics revolution: how to improve your business by making analytics operational in the big data era,. Hoboken: Wiley

➢ Michael Minelli. Hoboken. Big data, big analytics: emerging business intelligence and analytic trends for today's business,: John Wiley & Sons

Semester	Course Code	Course Title	Total Credits	Type Elective
Sem 4	BUS 4EB 08	SOCIAL MEDIA, WEB & TEXT ANALYTICS	3	Elective - Business Analytics

Introduction:

This course serves as a gateway to the multifaceted realm of social media, web, and text analytics, where data from these sources is harnessed for meaningful analysis. Students will embark on a journey of exploration, delving into the methodologies and techniques that underpin the extraction, cleaning, and interpretation of data from social media platforms, websites, and textual content. By the conclusion of this course, participants will be well-versed in leveraging these analytical approaches to derive valuable insights, inform strategies, and drive informed decision-making in the digital age.

Course Objectives:

The course on "Social Media, Web & Text Analytics" is structured with several overarching objectives. It seeks to provide students with a comprehensive understanding of the methodologies and techniques underpinning the analysis of data derived from social media, web sources, and textual content. This encompasses data extraction, preprocessing, and interpretation, fostering proficiency in uncovering valuable insights from these diverse data streams. The course emphasizes the application of analytics in informing strategic decisions across a spectrum of domains, encompassing marketing, sentiment analysis, and trend forecasting.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Discuss Web Analytics and Text Analytics in multiple business domains and scenarios

2	L5	Develop a thought process to harness the power of social media analytics to improve websites or business.
3	L4	Analyze Social Media Analytics, Web Analytics and text Tools
4	L5	Select the right metrics for Social Media Analytics Web Analytics and text analytics
5	L5	Evaluate the various tools and metrics in building high impact dashboard in multiple business domains and scenarios

CO – PO Mapping:

	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	2	0	0	0
2	3	0	0	2	0
3	3	0	0	2	0
4	2	3	0	0	0
5	0	3	0	2	0

Module	Syllabus	Hours allotted
1	**Social Media Overview** - definition, evolution, need of social media, Importance of Social Media- Social Media Data Sources: Data Resources, Use of Social Media in Business Challenges, Tools to analyze and measure social data (Facebook, Twitter, Instagram, LinkedIn, YouTube)	7
2	**Social Analytics** - Metric categories : Divide and Conquer, Selecting the best metrics for the job, Default and Custom Metrics - Elements of effective metrics : Metrics and Strategy, Estimated Metrics, Use and Common applications; Dashboards: Definition, Purpose, Objectives, default and custom dashboards - Data gathering in social Media Analytics : Types of Analytics in Social Media, Charts, Machine learning in Social Media	10
3	**Introduction to Web Analytics**: Definition, Process, Key Terms: Site References, Keywords and Key Phrases; Building Block Terms: Visit Characterization Terms, Content Characterization Terms; Conversion Metrics; Categories: Offsite Web, on Site Web; Web Analytics Platform. Web analytics Tools: A/B testing, Online Surveys, Web Crawling and Indexing.	10

4	**Facebook Analytics**: Introduction, Parameters, Demographics. Analyzing Page Audience: Reach and Engagement Analysis. Post- Performance on FB; Social Campaigns: Goals and Evaluating Outcomes, Measuring and Analyzing Social Campaigns. Google Analytics: Brief Introduction and Working, Google Website Optimizer, Implementation Technology, Limitations, Performance Concerns, Privacy Issues	10
5	**Text Analytics**: Introduction to text Analytics- Processing and Understanding Text –Tokenisation- Tagging Chunking, Stemming, Lemmatisation, Applications of Text Analytics	8
	Total	**45**

References:

➢ Web Analytics 2.0 : The Art of Online Accountability and Science of Customer Centricity by Avinash Kuashik

➢ Web Analytics : An Hour a Day by Avinash Kuashik

➢ Web Analytics Action Hero: Using Analysis to Gain Insight and Optimize Your Business by Brent Dykes

➢ Practical Web Analytics for User Experience by Michael Beasley

➢ Text Analytics with Python: A Practical Real-World Approach to Gaining Actionable Insights from your Data by Dipanjan Sarkar

➢ Social Media Marketing Step by Step: The Guides to Instagram and Facebook Marketing – Bryan Bren

➢ Social Media Analytics Strategy: Using data to optimize Business Performance–Alex Goncalves

➢ Effective Advertising and Social Media : Strategy and Analytics– Gerard Tellis

➢ Measuring the User Experience: Collecting, Analysing and Presenting Usability Metrics by Tom Tullis, Bill Albert, Morgan Kaufmann

➢ Social Media Metrics: How to Measure and Optimize Your Marketing Investment by Jim Sterne, John Wiley & Sons

➢ Advanced Web Metrics with Google Analytics by Brian Clifton, John Wiley & Sons

Semester	Course Code	Course Title	Total Credits	Type-Elective
Sem 4	BUS 4EB 09	INDUSTRY 4.0 AND INTERNET OF THINGS	3	Elective – Business Analytics

Introduction: This course, "Industry 4.0 and Internet of Things," explores the transformative landscape of modern industry. Students delve into the foundations of Industry 4.0, discovering its rationale and design principles, underpinned by technologies like Big Data, Artificial Intelligence, and the Industrial Internet of Things. They also investigate the critical domains of AI and Big Data, analyzing their historical evolution and practical applications. The IoT component equips learners with the knowledge of IoT architecture, data handling, and security measures. Students will also learn practical applications of Industry 4.0 across various sectors such as Manufacturing, Healthcare, Agriculture, Transportation...etc

Course Objectives:

The course on "Industry 4.0 and Internet of Things (IoT)" has several core objectives. It aims to provide a comprehensive understanding of Industry 4.0 concepts and IoT technologies, including their evolution, principles, and applications across industries. Participants will learn to harness IoT for data collection, connectivity, and automation, driving efficiency and innovation. The course emphasizes the integration of smart technologies, data analytics, and cybersecurity in the context of Industry 4.0.

Course Outcomes:
By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Understand the basic concepts of Industry 4.0 and Explain the significance of Big Data, Artificial Intelligence, and IoT in Industry 4.0.
2	L2	Explain the evolution of Big Data and its importance in Industry 4.0
3	L3	Explore Big Data applications in IoT and Machine Learning.

4	L3	Apply IoT data analytics and visualization techniques.
5	L5	Evaluate the impact of Industry 4.0 on society, businesses, governments, and individuals.

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	3	2	0	0	0
2	3	0	0	2	0
3	3	2	0	0	0
4	2	3	0	0	0
5	2	0	0	3	0

Module	Syllabus	Hours allotted
1	**Industry 4.0:** Need – Reason for Adopting Industry 4.0 – Definition -Technologies of Industry 4.0 – Big Data – Artificial Intelligence (AI) – Industrial Internet of Things - Cyber Security – Cloud computing – Augmented Reality	10
2	**Artificial Intelligence:** Artificial Intelligence: Artificial Intelligence (AI) – What & Why? - History of AI - Foundations of AI -The AI - Environment - Societal Influences of AI - Application Domains and Tools - Challenges of AI.	9
3	**Big Data:** Evolution - Data : Terminologies - Big Data Definitions - Essential of Big Data in Industry 4.0 - Big Data Merits and Advantages - Big Data Components : Big Data Characteristics - Big Data Applications - Big Data Tools - Big Data Domain Stack: - Big Data in IoT - Big Data in Machine Learning.	9

4	**Internet of Things (IoT) :** Introduction to IoT - Architecture of IoT - Major component of IOT(Hardware & Software) - Technologies for IoT - IOT Data Acquisition & Platforms - IOT Data Communication - IOT Data Storage & Retrieval - Security in IoT.	9
5	**Applications and tools of Industry 4.0:** Applications of IoT – Manufacturing – Healthcare – Education – Agriculture – Transportation and Logistics – Impact of Industry 4.0 on Society: Impact on Business, Government.	8
	Total	**45**

References:

➢ Alasdair Gilchrist. Industry 4.0: The Industrial Internet of Things, Apress Publications
➢ Fourth Industrial Revolution, by Klaus Schwab
➢ "Artificial Intelligence: A Modern Approach" by Stuart Russell and Peter Norvig
➢ "Big Data: A Revolution That Will Transform How We Live, Work, and Think" by Viktor Mayer-Schönberger and Kenneth Cukier
➢ Kaliraj, T. Devi, Higher Education for Industry 4.0 and Transformation to Education 5.0

➢ Introduction to Industry 4.0 and Industrial Internet of Things - https://onlinecourses.nptel.ac.in/noc20_cs69/preview
➢ Implementing Industry 4.0: Leading Change in Manufacturing and Operations - https://executive.mit.edu/course/implementing-industry-4.0/a056g00000URaZvAAL.html

Semester	Course Code	Course Title	Total Credits	Type Core/Elective
Sem 4	BUS 4EB 10	BUSINESS DATABASE SYSTEMS	3	Elective

Introduction:

Business Database Systems are integral to modern business operations, facilitating the organization, storage, and management of data. These systems streamline processes by enabling efficient data retrieval, analysis, and decision-making. By integrating data from multiple sources, they support strategic planning and enhance operational efficiency. With features like data security and scalability, business database systems ensure the integrity and reliability of information. They empower businesses to gain valuable insights into customer behavior, market trends, and operational performance, enabling informed decision-making and competitive advantage. In essence, business database systems are indispensable tools for optimizing processes, driving innovation, and achieving organizational goals in today's dynamic business landscape.

Course Objectives:

The course Business Database Systems is designed with a set of comprehensive objectives to provide students with a solid foundation in the field. This course aims to provide a comprehensive understanding of business database systems. Topics include database environments, traditional vs. modern systems, user types, DBMS components, file organization, memory hierarchy, data modeling with ER diagrams, distributed database concepts, security measures, and normalization techniques. Students will gain practical skills through hands-on exercises and real-world projects, preparing them to design, implement, and manage effective database systems in business environments.

Course Outcomes:

By the end of the course, the student will be able to

Course Outcome Number	Blooms Taxonomy Levels (BTL)	Course Outcome
1	L2	Explain the fundamental elements of the business database environment.
2	L3	Apply principles of database design to develop models in complex business scenarios.
3	L4	Examine File organization in DBMS
4	L6	Develop Conceptual data models

5	L5	Appraise on Distributed data models and security

CO – PO Mapping:

CO Number	PO 1	PO 2	PO 3	PO 4	PO 5
1	2	3	0	0	0
2	2	3	0	0	0
3	0	2	0	0	2
4	3	2	0	0	0
5	0	2	0	3	0

Module	Syllabus	Hours allotted
1	**Database Environment**: Functioning of a Simple Centralized Database System, Traditional File Systems vs. Modern Database Management Systems, Properties of Database, Types of Database Users, Advantages of DBMS, Applications	7
2	**Data Model**: Schemas and Instances, three schema architecture, Languages and Interfaces, DBMS Components, Classification of Database Management Systems, DDL, DML and use of SQL in relational Databases and normalization.	10
3	**File Organization**: Memory Hierarchy, Secondary Storage Devices, Buffering of Blocks, Placing File Records on Disk, Operation on Files, Files of Unordered Records (Heap Files), Files of Ordered Records, Hashing Techniques- primary index and clustering index	10
4	**Conceptual Data model**: ER Model Concept using example, Components of an ER Model, Relationships, Roles and Structural constraints, Constraints on Relationship Types	8
5	**Distributed DBMS Concepts**: Client-Server Model, Data Fragmentation, Replication, and Allocation Techniques for Distributed Database Design Security	10

	and Integrity Violations, Authorization, Granting of Privileges	
	Total	**45**

References:

➢ J. Date, A. Kannan and S. Swamynathan, An Introduction to Database Systems, Pearson Education.
➢ Raghu Ramakrishnan, Johannes Gehrke, Database Management Systems, McGraw Hill Higher Education
➢ Abraham Silberschatz, Henry F. Korth and S. Sudarshan, Database System Concepts, McGraw-Hill Education (Asia).
➢ Shio Kumar Singh, Database Systems Concepts, Designs and Application, Pearson Education.
➢ Peter Rob and Carlos Coronel, Database Systems Design, Implementation and Management, Thomson Learning-Course Technology.
➢ Patrick O'Neil and Elizabeth O'Neil, Database Principles, Programming and Performance, Harcourt Asia Pvt. Ltd.

SPECIALISATION - FINANCE

SET 1
UNIVERSITY OF CALICUT
…….. SEMESTER MBA DEGREE
Course Code: BUS 3E F01
Course Name: Security Analysis and
Max. Marks: 60

Possible return R (%)	`Probability
30	.50
40	.30
50	.20

EXAMINATION, MONTH, YEAR

Portfolio Management

Duration: 3 Hours

PART A

Answer all questions, each carries 2 marks.

Marks

1

Why is investment considered different from speculation?

(2)

2

A company is expected to pay Rs 2 dividend for the next year which is expected to grow annually @12%. If the investor's expected return is 15% what is the ideal price of the company's share?

(2)

3

How does the secondary market promote the financial markets?

(2)

4

Explain why it is easier to control unsystematic risk than systematic risk

(2)

5

How does CAPM help in decision making while constructing portfolios?

(2)

PART B
Answer any FOUR questions from this section. Each question carries 4 marks.

6

What is the expected return of the stock with the following probability of returns?

(4)

7

Explain the suitability of different investment instruments for different investors?

Period	1	2	3
Return on stock(%)	10	14	18
Return on market(%)	12	14	13

(4)

8

Stock exchanges play a crucial role in the financial markets. Do you agree?

(4)

9

A security pays a dividend of Rs 4 and currently sells at Rs 85. The security is expected to sell at Rs 90 at the end of the year. The stock's beta is 1.15, risk-free rate is 5% and expected market return is 12%. Is the stock correctly priced?

(4)

10

Describe the methods useful to track portfolio performance.

(4)

11

Which are the elements of risk for a stock and how can it be measured?

(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12

Comment on the risk level of the following stock using beta?

(8)

13

Which is the hypothesis supporting market efficiency? How can it be tested in its different forms?

(8)

14

The rate of return and risk for 3 funds based on last 5 years performance are given below

Fund	Portfolio Return	S.D of portfolio	Beta
Franklin	25.38	4	0.23
Sundaram	25.11	9.01	0.56
Mirae Asset	25.01	3.55	0.59

If the risk-free return is 9%, rank the funds based on Sharpe and Treynor's Index. Do the rankings differ in both Indexes? If yes, explain why

(8)

15

Why is it necessary to revise portfolios? What strategies can be used for its revision?

(8)

16

Explain how different technical analysis tools help in predicting market patterns.

(8)

1. What is the return and standard deviation of the portfolio comprised of 40% of stock A and 60% of B. Comment on the effect of portfolio creation on the risk and return.

Year	Return of Stock A (%)	Return of Stock B (%)
1	6	4
2	7	6
3	8	8

(10)

SET 1		
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)		
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR		
Course Code: BUS 3E F01		
Course Name: Security Analysis and Portfolio Management		
Max. Marks: 60		Duration: 3 Hours
PART A		
Answer all questions, each carries 2 marks.		Marks
1	**4 points of 1 mark each** **Time: Investment** involves a longer time horizon where speculators aim to	(2)

		profit from short-term price movements in assets	
		Risk: Investment involves managing risk, whereas speculative activities are more volatile leading to potentially higher gains or losses.	
		Purpose: Investment: aims to build wealth over the long term, **Speculation: is** motivated by short-term profits or excitement.	
		Investment: Involves thorough analysis of fundamental factors such as economy, industry and company. **Speculation:** relies on technical analysis, market sentiment, and short-term price patterns.	
2		$P_{0=\frac{D_1}{k_{e-g}}}$ = $P_{0=\frac{2}{.15-.12}}$ =Rs 66.6 Formula 1 marks solution 1 mark	(2)
3		**4 points of 1 mark each**	(2)
		Continuous Trading: In secondary market, securities are bought and sold continuously during trading hours, providing investors opportunities to enter and exit positions.	
		Market Makers: Many secondary markets have liquidity providers who facilitate trading by continuously quoting bid and ask prices for securities.	
		Electronic Trading Platforms: Electronic trading platforms enable investors to trade securities electronically in real-time.	
		Clearing and Settlement Systems: Secondary markets rely on efficient clearing and settlement systems to finalize transactions and transfer ownership of securities between buyers and sellers.	
		Regulatory Framework: Rules and regulations governing secondary market operations promote fair, transparent, and orderly trading.	
4		Explanation of the reason 2 marks (no marks for just the definition)	(2)
		Unsystematic risk, also known as specific risk or diversifiable risk, is unique to a particular company or industry and can be reduced through diversification. Systematic risk, also known as market risk or non-diversifiable risk, affects the entire market or a broad segment of the market and cannot be eliminated through diversification.	
5		Explanation of the importance 2 marks (no marks for just the meaning of CAPM)	(2)
		CAPM helps portfolio managers in constructing and managing diversified investment portfolios. By considering the risk and return of individual assets in the entire portfolio, managers can optimize portfolio allocations to achieve the desired returns according to the risk appetite.	

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		30	0.5	15	(4)
			0.3	12	
		40			
		50	0.2	10	
		Return=		**37%**	
7		Explanation of various alternatives of investments 2 marks Their pros and cons. 2 marks			(4)
8		Points with brief explanation of the importance of stock exchange Points 1 mark explanation 3 marks			(4)
9		**2.** R= (90-85+4)/85*100= 10.6% 1 mark **3.** Expected return= 5+1.15(12-5) = 13.05% 1 mark **4.** Since the actual return is less than expected return stock is overpriced 2 marks			(4)
		5.			

10		Naming at least 4 methods for evaluation 2 marks. Its interpretation 2 marks	(4)
11		Elements for risk 2 marks, tools for measurement 2 marks	(4)

		PART C	

Answer any THREE questions from this section. Each question carries 8 marks

12		Beta= cov(stock,mkt)/var mkt 1 mark =1.33/.67=2 4 marks The stock is an aggressive stock since its beta is greater than 1 3 marks	(8)
13		Meaning of EMH:1 mark, types 3 marks, tests 4 marks	(8)

14			(8)

Sharpe	Rank	Treynor	Rank
4.10	2	71.22	1
1.79	3	28.77	2
4.51	1	27.14	3

Calculation 3 marks, ranking 3 marks, explanation for reason of difference in ranking 2 marks

15		Need for portfolio revision 2 marks, methods of revision 3 marks, explanation of the revision methods 3 marks	(8)
16		Naming the technical tools 3 marks, explanation of how the tools help in prediction 5 marks	(8)

		PART D (Compulsory Question)	

17		Stock A return 7%, Stock B return 6%, Portfolio return 6.4% (3 marks @1 mark each) Stock A variance .67%, Stock B variance 2.67%, (2 marks @ I mark each) Portfolio SD=1.3% (3 marks) The return of the portfolio is 6.4 % which is higher than stock B. The risk of stock B has reduced from 2.67 to 1.3 due to the portfolio diversification (2 marks)	(10)

SET 1
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3E F02
Course Name: STRATEGIC COST MANAGEMENT

Max. Marks: 60			Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		Define the term cost driver.	(2)
2		What do you mean by kaizen costing?	(2)
3		Define by product and joint product.	(2)
4		Explain the term prime cost and overhead.	(2)
5		Enumerate the major managerial application of marginal costing	(2)

		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Discuss the key characteristics of target costing.	(4)
7		Discuss the various process costing methods in service sector.	(4)
8		Distinguish between marginal costing and absorption costing	(4)
9		Explain in detail the different elements of cost	(4)
10		Explain the features of ERP. What are the benefits of ERP.	(4)
11		Explain the steps involved in implementing Activity-Based Costing (ABC) in world-class manufacturing companies.	(4)

		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		Compare and contrast cost reduction an cost control. In this context, compare Kaizen costing and Standard costing with regard to their basic philosophies.	(8)
13		Discuss the need, importance and relevance of activity based costing.	(8)
14		What are the objectives and assumptions of CVP analysis?	(8)
15		ABC Ltd has collected following data for its two activities:	(8)

Q15:

Activity	Cost Driver	Capacity	Cost (Rs.)
Power	Kilowatt hours	50000	200000
Inspection	No of Inspections	10000	300000

The company makes 3 products A, B and C. For the year ended 31st March, 2022, the following consumption of cost drivers was reported.

Product	Kilowatt-hours	Quality Inspections
A	10000	3500
B	20000	2500
C	15000	3000

a) Compute cost allocated t each product from each activity?
b) Calculate the cost of unused capacity for each activity?

16		From the following particulars of M/s. Gods own canteen - a canteen based in Kozhikode specialised in serving meals, relating to the cost 4500 meals served by its, Find the total operating cost and the cost per meal:	(8)

Details   Rs.

Food   25000
Bakery Items   8000
Beverages   6500
Salaries and wages of staff   14000

		Heating and Lighting 4000 Consumables stores 2000 Repairs and Maintenances 3000 Depreciation 1000 Premises rent 2000 Interest 1500	

PART D (Compulsory Question, 10 marks)

1 7		From the following data	(10)

	2011(Rs.)	2012 (Rs.)
Sale	1200000	1400000
Profit	80000	130000

Calculate:
(a) P/V Ratio.
(b) BEP.
(c) Fixed Cost.
(d) Margin of safety.
(e) The profit or loss when sales amount to Rs 1800000
(f) The sales required to earn a profit of Rs. 120000.

Max. Marks: 60			Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Identification and explanation of the concept of a cost driver: 1 mark Clarification of the role of cost driver in determining the cost of an activity: 1 mark	(2)
2		Description of kaizen costing as a continuous improvement approach in costing: 1 mark Explanation of how kaizen costing involves incremental improvements to reduce costs: 1 mark	(2)
3		Definition of by-product and its distinction from main products: 1 mark Definition of joint product and explanation of its occurrence in production processes: 1 mark	(2)
4		Definition and explanation of prime cost as direct costs of production: 1 mark Definition and explanation of overhead as indirect costs not directly attributable to specific products: 1 mark	(2)
5		Listing and brief explanation of major managerial applications such as pricing decisions, product mix decisions, etc.: 2 marks	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Explanation of the concept of target costing and its purpose: 1 mark Discussion of the key characteristics such as customer focus, proactive cost management, and cross-functional involvement: 2 marks Illustration of how target costing is applied in practice or examples of industries where it's commonly used: 1 mark	(4)
7		Overview of process costing in service industries: 1 mark Discussion of various methods: 2 marks Explanation of how these methods are applied in service sector contexts: 1 mark	(4)
8		Clear definition and explanation of marginal costing: 1 mark Clear definition and explanation of absorption costing: 1 mark Detailed comparison highlighting differences in treatment of fixed manufacturing overhead, inventory valuation, and profit calculation: 2 marks	(4)
9		Identification and explanation of major elements such as material cost, labor	(4)

		cost, and overhead cost: 2 marks Detailed explanation of each element including sub-categories or components: 2 marks	
1 0		Discussion of ERP features such as integration, centralization, and real-time data access: 2 marks Explanation of ERP benefits including improved efficiency, better decision-making, and enhanced collaboration: 2 marks	(4)
1 1		Description of the steps involved in implementing ABC, such as identifying activities, assigning costs to activities, and allocating costs to products: 2 marks Discussion of challenges or considerations specific to world-class manufacturing companies: 1 mark Explanation of how ABC implementation enhances cost management and decision-making: 1 mark	(4)
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
1 2		Clear explanation of cost reduction and cost control: 2 marks Comparison of Kaizen costing and Standard costing in terms of basic philosophies: 4 marks Analysis of similarities and differences between Kaizen costing and Standard costing: 2 mark	(8)
1 3		Explanation of the need for activity-based costing in modern business environments: 2 marks Discussion of the importance of activity-based costing in enhancing cost accuracy and decision-making: 3 marks Exploration of the relevance of activity-based costing in specific industries or contexts: 3 marks	(8)
1 4		Identification and explanation of the objectives of CVP analysis: 2 marks Identification and explanation of the assumptions of CVP analysis: 3 marks Analysis of how these objectives and assumptions contribute to decision-making: 3 marks	(8)
1 5		Calculation of cost allocated to each product from each activity: 4 marks Calculation of the cost of unused capacity for each activity: 4 marks	(8)
1 6		Calculation of total operating cost: 4 marks Calculation of cost per meal: 4 marks	(8)
PART D (Compulsory Question)			
1		(a) **Calculate P/V Ratio.**	(10)

7			

		• Correct calculation of P/V Ratio: 1 marks
		
		(b) **Calculate BEP (Break-even Point).**
		
		    • Correct calculation of BEP: 2 marks
		
		(c) **Calculate Fixed Cost.**
		
		    • Correct calculation of Fixed Cost: 1 marks
		
		(d) **Calculate Margin of Safety.**
		
		    • Correct calculation of Margin of Safety: 2 marks
		
		(e) **Calculate the profit or loss when sales amount to Rs 1800000.**
		
		    • Correct calculation of profit or loss: 2 mark
		
		(f) **Calculate the sales required to earn a profit of Rs. 120000.**
		
		    • Correct calculation of required sales: 2 mark		

UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR			
Course Code: BUS 3EF03			
Course Name: Banking and Insurance			
Max. Marks: 60			Duration: 3 Hours
PART A			
Answer all questions, each carries 2 marks.			Marks
1		Define banking	(2)
2		What are Non- Performing Assets?	(2)
3		What are NRO accounts?	(2)
4		What is digital banking?	(2)
5		What do you mean by insurable interest?	(2)
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		Explain the functions of Central bank.	(4)
7		Discuss the principles of sound lending.	(4)
8		Explain the duties of a collecting banker.	(4)
9		Explain the potential risks associated with relying heavily on computerized banking systems	(4)

10	What are the key components of insurance contract?	(4)
11	Examine the functions of banking ombudsman.	(4)
PART C		
Answer any THREE questions from this section. Each question carries 8 marks		
12	Discus the modes of termination of banker customer relationship.	(8)
13	How do financial institutions assess the creditworthiness of potential borrowers during the appraisal process?	(8)
14	Elaborate the ancillary services of banks.	(8)
15	What are some of the risks and challenges associated with the increasing digitization of banking services, particularly concerning cyber security and data privacy?	(8)
16	Explain the principles risk management in insurance	(8)
PART D (Compulsory Question, 10 marks)		
17	Draw and explain the structure of Indian banking system	(10)

PART A		
Answer all questions, each carries 2 marks.		Marks
1	The term "banking" as per the Banking Regulation Act (BR Act) - Explanation 2 marks	(2)
2	Non-performing assets (NPAs) are loans or advances extended by financial institutions, such as banks, that have stopped generating income for the lender. Explanation 2 marks	(2)
3	NRIs can open Non-Resident Ordinary (NRO) deposit accounts for collecting their funds from local bonafide transactions. Explanation 2 marks	(2)
4	Digital banking encompasses a wide range of banking activities that customers can perform electronically - Explanation 2 marks	(2)
5	Insurable interest refers to a financial stake or concern that an individual or entity possesses in a particular property or person, which would suffer a financial loss or detriment in the event of damage, loss, or injury to that	(2)

		property or person.	
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		1. Monopoly of Note Issue 2. Banker's Bank 3. Banker to the Government 4. Controller of Credit 5. Exchange Management and Control 6. Miscellaneous Functions 7. Promotional and Developmental Functions. (Any four points 4 marks)	(4)
7		(a) Principle of Safety of Funds (b) Principle of Profitability (c) Principle of Liquidity (d) Principle of Purpose (e) Principle of Risk Spread (f) Principle of Security (Any four points 4 marks)	(4)
8		Duty to open the account with references and sufficient documentary proof, Duty to confirm the reference where the referee is not known or has given reference in absentia, Duty to ensure crossing and special crossing, Duty to verify the instruments or any apparent defect in the instrument, Duty to take into account the state of customer's account (Any four points 4 marks)	(4)
9		Cyber security threats, data breaches, social engineering attacks (Any four points 4 marks)	(4)
1 0		Policyholder: Insurer: Premium: Coverage: Policy Limits: Deductible: Exclusions: Conditions: Policy Term: Renewal and Cancellation Provisions: Claim Process: Indemnity: (Any four points 4 marks)	(4)
1 1		1. Resolving Customer Complaints 2. Mediation and Arbitration 3. Ensuring Compliance 4. Educating Customers 5. Promoting Fair Practices 6. Monitoring Trends and Issues (Any four points 4 marks)	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
1 2		A. Voluntary Termination: B. If the Bank desires to close the account. Explanation 8 marks	(8)
1 3		Credit Score, Income and Employment Stability, Debt-to-Income Ratio (DTI), Financial Statements, Collateral, Credit History, Purpose of the Loan, Character and References, Loan Documentation and Application - Explanation 8 marks	(8)
1 4		Wealth Management: Insurance Services: Investment Banking: Financial Advisory Services: Trust Services: Foreign Exchange Services: Treasury Management: Payment Processing Services: Escrow Services: Credit Card Services: and Electronic Banking Services:. Trade Finance - Explanation 8 marks	(8)
1 5	1. 2. 3. 4. 5.	Cybersecurity Threats Data Breaches Identity Theft and Fraud Third-Party Risks Regulatory Compliance	(8)

	6.	Customer Trust and Reputation	
	7.	Technological Vulnerabilities	
	8.	Insider Threats - Explanation 8 marks	
16		Utmost Good Faith Insurable Interest Indemnity Proximate Cause Subrogation Contribution Mitigation of Loss (Minimization) - Explanation 8 marks	(8)

PART D (Compulsory Question)

17		The constituents of the Indian Banking System can be broadly listed as under : (a) Commercial Banks: (i) Public Sector Banks (ii) Private Sector Banks (iii) Foreign Banks (b) Cooperative Banks: (i) Short term agricultural institutions (ii) Long term agricultural credit institutions (iii) Non-agricultural credit institutions (c) Development Banks: (i) National Bank for Agriculture and Rural Development (NABARD) (ii) Small Industries Development Bank of India (SIDBI) (iii) EXIM Bank (iv) National Housing Bank Explanation 10 marks	(10)

SET 1
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EF 04
Course Name: Forensic Accounting

Max. Marks: 60			Duration: 3 Hours
PART A			
Answer all questions, each carries 2 marks.			Mark

			s
1		Define the term forensic accounting	(2)
2		Illustrate with examples two types of financial statement fraud	(2)
3		Describe the term 'Fraud Pentagon'	(2)
4		List the common software tools used for forensic audit	(2)
5		Identify two entities within the Indian jurisdiction actively engaged in the prevention of financial fraud.	(2)

PART B
Answer any FOUR questions from this section. Each question carries 4 marks.

6		What is the fraud triangle, and how does it define the fundamental principles of fraudulent activities?	(4)
7		What methods and tools are commonly used to detect financial statement fraud, and how do they identify deceptive practices in financial reporting?	(4)
8		Define forensic accounting and the scope of its application.	(4)
9		Analyze the importance of effective interviewing skills in forensic accounting.	(4)
10		How can data mining contribute to identifying patterns and anomalies indicative of financial fraud?	(4)
11		Differentiate between the civil and criminal justice systems in India.	(4)

PART C
Answer any THREE questions from this section. Each question carries 8 marks

12		Elaborate on the Hollinger Clark Theory and its role in shaping our understanding of fraudulent behavior. How does this theory contribute to fraud detection and prevention?	(8)
13		Explore various types of financial statement frauds, such as fictitious revenues, fabricating revenue, and inadequate provisions for sales and returns. Provide real-world examples to illustrate each type.	(8)
14		Examine the common barriers to effective interviews in forensic accounting. How can these barriers be overcome to enhance the reliability of information obtained during investigations?	(8)
15		Review the components of a forensic audit report. How should forensic auditors communicate their findings, and what elements are crucial for a comprehensive and convincing report?	(8)
16		Scrutinize the significance of The Information Technology Act, 2000, as amended in 2008, in the context of cybersecurity and digital transactions in India.	(8)

PART D (Compulsory Question, 10 marks)

17		Apply the principles of fraud and forensic accounting to analyze a hypothetical scenario involving corporate financial statements. Discuss how the fraud triangle and other fraud theories could be utilized to identify potential red flags and recommend strategies for a forensic accountant to investigate and address the situation effectively	(10)

SET 1	
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)	
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR	
Course Code: BUS 3EF 04	
Course Name: Forensic Accounting	
Max. Marks: 60	Duration: 3 Hours
PART A	

		Answer all questions, each carries 2 marks.	Marks
1		Investigative accounting applying financial expertise to legal matters, often involving fraud examination – 2 marks	(2)
2		Fictitious Revenues: Recording non-existent sales to inflate financial performance and mislead stakeholders. Sales with Conditions: Manipulating sales transactions with undisclosed terms to distort financial statements – Any two items - 2 marks	(2)
3		Framework encompassing pressure, opportunity, rationalization, capability, and concealment in fraudulent activities analysis – 2 marks	(2)
4		ACL, IDEA, EnCase, FTK, Tableau – Any two – 2 marks	(2)
5		Central Bureau of Investigation (CBI) ; Serious Fraud Investigation Office (SFIO) – List any two – 2 marks	(2)
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		The fraud triangle: Pressure, opportunity, rationalization—fundamental elements defining motives and circumstances leading to fraudulent activities – explanation 4 marks	(4)
7		Common methods: Data analytics, anomaly detection, forensic accounting. Tools: ACL, IDEA, aiding deception identification – Explanation 4 marks	(4)
8		Forensic accounting: Applies accounting skills to legal matters, detecting and preventing financial fraud and crimes – 4 marks	(4)
9		Effective interviewing crucial for obtaining accurate information, uncovering evidence, and building strong legal cases – 4 marks	(4)
10		Data mining analyzes vast datasets, uncovering irregular patterns and anomalies that signal potential financial fraud through statistical algorithms and modelling – 4 marks	(4)
11		Objectives; Nature of cases; Standard of Proof; Outcomes – List and explain any 4 – 4 marks	(4)
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		Explores psychological factors influencing fraud, aiding detection and prevention strategies through behavioural insights. – explanation – 8 marks	(8)
13		Fictitious Revenues: Example: Enron recorded nonexistent energy trades to inflate profits, deceiving investors and stakeholders. Fabricating Revenue: Example: WorldCom inflated revenue by capitalizing costs, misrepresenting financial health and deceiving shareholders. Inadequate Provisions for Sales and Returns: Example: Tyco understated provisions for product returns, concealing financial risks and misleading investors. – Explanation with examples – 8 marks	(8)
14		**Common barriers to** effective interviews in forensic accounting include: Witness Reluctance: Limited Cooperation: Memory Limitations: Deceptive Practices: **To enhance reliability:** Establish Trust: Legal Assurance: Use Cognitive Techniques: Verify Information: Any four points mentioned under both questions – 8 marks	(8)
1		Executive Summary: Introduction: Methodology: Findings: Analysis:	(8)

5		Conclusion: Summarization of key findings and their implications: Recommendations – 8 marks	
1 6		The Information Technology Act, 2000, amended in 2008, establishes legal norms, addresses cyber threats, and promotes secure digital transactions in India – explanation 8 marks	(8)
		PART D (Compulsory Question)	
1 7		Apply the principles of fraud and forensic accounting – 4 marks Discuss how the fraud triangle and other fraud theories could be utilized to identify potential red flags – 4 marks Recommendation of strategies for a forensic accountant to investigate and address the situation effectively – 2 marks	(10)

SET 1
UNIVERSITY OF CALICUT 3rd SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EFBA05
Course Name: FINANCIAL ANALYTICS

Max. Marks: 60			Duration: 3 Hours
PART A			
1	**_Answer all questions, each carries 2 marks._**		Mar

			ks
1		Explain the significance of financial analytics in the digital age and mention one type of financial analytics.	(2)
2		Explain the importance of financial statement analysis in business decision-making and name two tools used in this analysis.	(2)
3		Describe the difference between technical analysis and fundamental analysis in the context of equity markets.	(2)
4		Define financial modeling and name two types of financial models commonly used in forecasting.	(2)
5		Define machine learning and differentiate between supervised and unsupervised learning with one example of how each can be applied in financial analytics.	(2)

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PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

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6		Discuss the role of data cleaning and preparation in the financial analytics process. Why is it critical for accurate financial modeling and forecasting?	(4)
7		A company's financial statements reveal the following: Sales in Year 1: $500,000; Sales in Year 2: $550,000; Net Income in Year 1: $50,000; Net Income in Year 2: $70,000. Calculate the Net Profit Margin for both years and discuss what the change implies about the company's financial health.	(4)
8		Given the following portfolio of stocks and their respective weights in the portfolio: Stock A (40% weight, Beta = 1.2), Stock B (60% weight, Beta = 0.8). Calculate the portfolio's beta and discuss its market risk implication compared to the overall market.	(4)
9		Compare and contrast regression analysis with time series analysis in the context of financial forecasting. Under what circumstances might one method be preferred over the other?	(4)
10		Describe the role of text mining in financial analytics and provide an example of how text mining can be utilized to gain insights from financial news or reports.	(4)
11		XYZ Corporation has provided the following financial information for the fiscal year ending 2022: Net Income: $120,000 Sales Revenue: $600,000 Total Assets: $1,000,000 Shareholders' Equity: $500,000 Using the Du Pont Analysis framework, calculate the following for XYZ Corporation: ● Return on Equity (ROE) for the fiscal year ending 2022. ● Break down the ROE calculation into its three components: ● Net Profit Margin (Net Income / Sales) ● Asset Turnover (Sales / Total Assets) ● Equity Multiplier (Total Assets / Shareholders' Equity) Based on your calculations, analyze how XYZ Corporation's operational efficiency, asset use efficiency, and financial leverage contribute to its Return on Equity.	(4)

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PART C

Answer any THREE questions from this section. Each question carries 8 marks

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12		Given a dataset with financial transactions over the past year for a retail company, outline the steps you would take to perform exploratory data analysis (EDA). How would this EDA facilitate the creation of a financial model to forecast the company's sales for the next quarter? Include considerations for data sources, collection tools, and any specific financial analytics techniques you would apply.	(8)
13		Given the following simplified financial data for Company XYZ:	(8)

		Cash at start of year: $20,000	
		Cash at end of year: $40,000	
		Net income: $30,000	
		Depreciation expense: $5,000	
		Increase in accounts receivable: $10,000	
		Increase in accounts payable: $7,000	
		Prepare a Cash Flow Statement for the year and analyze the company's cash flow health, specifically focusing on operating, investing, and financing activities.	
14		Consider a bond issued by Company XYZ with a face value of $1,000, a coupon rate of 5%, and 5 years to maturity. The current market yield is 4%. Calculate the bond's price. Additionally, using Value at Risk (VaR) methodology, assess the bond's price sensitivity to a 1% increase in market yield, assuming a 1-day time horizon and 95% confidence level. Discuss how investors can use this information for risk management and investment decisions.	(8)
15		Describe the process of building a financial model for a startup company looking to forecast its revenue over the next five years. Discuss the types of financial models that could be employed, the selection of variables for regression analysis, and how time series analysis could be integrated. Additionally, outline the steps involved in validating the model and ensuring its accuracy for decision-making purposes.	(8)
16		Consider a financial institution looking to predict loan default risk based on historical customer data. Outline a machine learning approach for this problem, specifying whether supervised or unsupervised learning would be more appropriate. Discuss the selection of algorithms, the process of feature selection, and how the model's performance could be evaluated. Additionally, consider the ethical implications of using machine learning in this context.	(8)

PART D (Compulsory Question, 10 marks)

17		BlueChip Tech's Market Expansion and Risk Management	(10)
		BlueChip Tech, a leading technology firm, has seen significant growth over the past year and is now looking to expand its operations into emerging markets. The company has a robust product line that includes both consumer and enterprise solutions, with a strong focus on innovation and sustainability. As part of its expansion strategy, BlueChip Tech is considering a significant investment in a new manufacturing facility in Southeast Asia and plans to finance this expansion through a combination of equity issuance and long-term bonds. The projected cost of the new facility is $200 million, with expected annual revenues contributing an additional 15% to the company's total revenue once fully operational.	
		Financial Data:	
		Current Equity Value: $1 billion	
		Current Bond Value: $500 million	
		Expected Annual Revenue Increase from Expansion: $150 million	
		Current Annual Revenue: $1 billion	
		Expected Investment Cost for Expansion: $200 million	
		Beta of BlueChip Tech: 1.2	
		Market Risk Premium: 5%	
		Risk-Free Rate: 2%	
		As part of its risk management strategy, BlueChip Tech has engaged in a comprehensive analysis to understand the various risks associated with this expansion, including market risk, credit risk, and operational risks related to setting up operations in a new market. The company is also exploring the use of derivatives to hedge against currency and interest rate risks.	

Questions:

A. Calculate the expected return on equity (ROE) for BlueChip Tech post-expansion using the Capital Asset Pricing Model (CAPM) to estimate the cost of equity. Consider the impact of the new investment on the company's leverage and overall cost of capital. Use the provided financial data and assume the debt-to-equity ratio remains constant post-expansion.

B. Discuss the potential market and operational risks BlueChip Tech might face with its expansion into Southeast Asia. How could the company use financial derivatives as part of its risk management strategy to mitigate these risks? Consider the types of derivatives that might be most appropriate for hedging against currency and interest rate fluctuations in this context.

SET 1

Scheme of Valuation/Answer Key
(Scheme of evaluation (marks in brackets) and answers of problems/key)

Course Code: BUS 3EFBA05

Course Name: Financial Analytics

Max. Marks: 60			Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Mar ks
1		Financial analytics enables businesses to make data-driven decisions, optimize financial performance, and predict future trends with greater accuracy. Explanation – 2 marks	(2)
2		Financial statement analysis is crucial for business decision-making as it provides insights into a company's financial health, performance trends, and operational efficiency. Mention the keytools also – 2 marks	(2)
3		Technical analysis and fundamental analysis are two primary methods used in equity markets to evaluate stocks. Explanation – 2 marks	(2)
4		Financial modeling involves creating representations of a company's financial performance to forecast future financial outcomes based on various scenarios. Two common types of financial models used in forecasting are the discounted cash flow (DCF) model and the three-statement model – Explanation 2 marks	(2)
5		Machine learning is a subset of artificial intelligence (AI) that enables systems to learn from data, identify patterns, and make decisions with minimal human intervention. Explanation – 2 marks	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Data cleaning and preparation are foundational steps in the financial analytics process, essential for ensuring the accuracy and reliability of financial modeling and forecasting. – Explanation 4 marks	(4)
7		Year 1 Net Profit Margin: $50,000 / $500,000 = 10% (2 marks) Year 2 Net Profit Margin: $70,000 / $550,000 = 12.7% (2 marks) The increase in net profit margin from Year 1 to Year 2 suggests an improvement in the company's financial health. This indicates that the company has become more efficient at converting sales into actual profit, possibly through better cost management or an increase in higher-margin sales.	(4)
8		Portfolio Beta = (Weight of Stock A * Beta of Stock A) + (Weight of Stock B * Beta of Stock B) = (0.4 * 1.2) + (0.6 * 0.8) = 0.48 + 0.48 = 0.96 (2 marks) A portfolio beta of 0.96 implies that the portfolio is slightly less volatile than the overall market (assuming a market beta of 1.0). This suggests the portfolio might offer slightly lower risk compared to the market, potentially resulting in less dramatic swings in value in response to market movements. (Explanation 2 marks)	(4)
9		Regression analysis is used to identify the relationship between a dependent variable and one or more independent variables, useful for causal analysis and prediction where variables are independent of time. Time series analysis, however, is specifically designed to analyze data points collected or indexed in time order, useful for forecasting future values based on historical trends. Explanation 2 marks	(4)
10		Text mining plays a significant role in financial analytics by extracting valuable information from unstructured text data, such as financial news, reports, and social media. Explanation 4 marks	(4)
11		Net Profit Margin: $120,000 / $600,000 = 20%	(4)

4		Asset Turnover: $600,000 / $1,000,000 = 0.6	
		Equity Multiplier: $1,000,000 / $500,000 = 2	
		ROE Calculation: ROE = Net Profit Margin * Asset Turnover * Equity Multiplier = 20% * 0.6 * 2 = 24%	
		The Du Pont analysis reveals that XYZ Corporation's ROE is driven by a strong net profit margin, indicating effective cost management and profitability. The asset turnover ratio shows moderate efficiency in using assets to generate sales. The equity multiplier indicates the company is leveraging debt to finance its assets, enhancing ROE. This combination suggests that while the company effectively converts sales into profit and leverages its assets well, there might be room to improve the efficiency of asset use to drive sales. (Each correct answer 1 mark)	

PART C

Answer any THREE questions from this section. Each question carries 8 marks

1 2		Data Collection and Cleaning: Gather financial transactions from various sources (POS systems, online sales platforms) and clean the data by removing duplicates, handling missing values, and correcting errors.	(8)
		Descriptive Analysis: Summarize the data to understand sales trends, including total sales, average transaction value, seasonality, and customer demographics.	
		Visual Analysis: Use visual tools like time series plots, histograms, and box plots to identify patterns, outliers, and distribution of sales data.	
		Correlation Analysis: Examine the relationship between sales and other variables (e.g., marketing spend, holidays, customer traffic) to identify potential predictors.	
		Explanation 8 marks	
1 3		Operating Activities:	(8)
		Net Income: $30,000	
		Adjustments: Add back depreciation ($5,000), increase in accounts receivable (-$10,000), increase in accounts payable ($7,000)	
		Net cash provided by operating activities: $30,000 + $5,000 - $10,000 + $7,000 = $32,000	
		Investing Activities: Not provided, assuming no investing activities for simplicity.	
		Financing Activities: Given the cash increase and operating cash flow, any difference not accounted for by investing activities might imply financing activities. For this example, we'll focus on operating activities.	
		Cash Flow Health Analysis: The company shows healthy cash flow from operations, indicated by a net increase in cash despite the increase in accounts receivable. The effective management of payables and the solid net income contribute positively to the operational cash flow.	
		Explanation 8 marks	
1 4		Step 1: Recalculate the Bond's Price for a Market Yield of 5%	(8)
		Given:	
		Face Value (FV) = $1,000	
		Coupon Rate = 5%	
		Annual Coupon Payment (CP) = FV * Coupon Rate = $1,000 * 5% = $50	
		Number of Periods (n) = 5 years	
		New Market Yield = 5%	

The bond price formula is:

$$\text{Bond Price} = \left(\text{Coupon Payment} \times \frac{1-(1+\text{Market Yield})^{-n}}{\text{Market Yield}}\right) + \left(\text{Face Value} \times (1 + \text{Market Yield})^{-n}\right)$$

Step 2: Value at Risk (VaR) Analysis

After calculating the bond's price at the new yield, we would typically use VaR to estimate the potential loss in the bond's value due to the yield increase. However, since VaR analysis requires a range of data and complex models, we'll focus on understanding the conceptual approach:

Step 3: Implications for Risk Management and Investment Decisions

Risk Management: Knowing the bond's sensitivity to yield changes helps in managing interest rate risk. Strategies might include diversification, duration analysis, or hedging.

Investment Decisions: Understanding price sensitivity aids in making decisions about buying, holding, or selling bonds based on interest rate expectations.

Step-by-Step Analysis:

Initial Price Calculation: At a 4% yield, the bond price was calculated as approximately $1,044.52, indicating the bond was priced at a premium due to its coupon rate being higher than the market yield.

Recalculated Price at 5% Yield: When the market yield increased to 5%, the bond price adjusted to $1,000.00, its face value, reflecting a decrease in price due to the yield increase.

Price Sensitivity and VaR Analysis: This change in bond price due to a 1% increase in yield illustrates the bond's interest rate risk. In a more detailed VaR analysis, we would quantify the potential loss from such changes under normal market conditions, providing a risk measure over a specified time horizon (e.g., 1 day) at a certain confidence level (e.g., 95%).

Implications for Investors:

Risk Management: Investors can use this sensitivity analysis to understand the bond's interest rate risk, helping them manage their portfolio's exposure to changes in market yields.

Investment Decisions: Knowledge of how bond prices respond to yield changes aids investors in making informed decisions, especially in anticipating interest rate movements. Strategies might include adjusting the portfolio composition, considering bond duration to balance risk, or using financial derivatives as hedges.

Solution to the problem – 4 marks; Explanation – 4 marks

15		Define Objectives: Establish that the model aims to forecast five-year revenue growth.	(8)

Data Collection and Variable Selection: Gather historical sales data, market research, and industry benchmarks. Select variables like market size, growth rate, pricing strategies, and customer acquisition costs for regression analysis.

Model Selection: Choose between linear regression for basic forecasting or more complex models like ARIMA for time series analysis, depending on data patterns and business complexity.

Integration and Validation: Integrate findings from both regression and time series analysis to construct a comprehensive model. Validate the model through back-testing with historical data and adjust based on performance.

Accuracy and Decision-Making: Ensure model accuracy by regularly updating it with new data and re-evaluating assumptions. Use the model to support strategic decisions, such as market entry, pricing strategies, and budget allocations.

1 6		Approach Selection: Supervised learning is more appropriate for predicting loan default risk, as historical data on loan performance (defaulted vs. non-defaulted) is available to train the model.	(8)
		Algorithm Selection: Decision trees, logistic regression, or gradient boosting machines could be effective in distinguishing between defaults and non-defaults based on historical data.	
		Feature Selection: Important features might include credit score, income level, employment status, loan amount, and previous default history. Feature selection techniques like recursive feature elimination can identify the most predictive variables.	
		Model Evaluation: Use metrics such as accuracy, precision, recall, and the ROC curve to evaluate model performance. Cross-validation helps assess the model's robustness across different data subsets.	
		Ethical Considerations: Ensure the model does not reinforce biases or discrimination by regularly auditing for fairness and transparency. Compliance with regulations like the Fair Credit Reporting Act (FCRA) and General Data Protection Regulation (GDPR) is crucial.	

PART D (Compulsory Question)

1 7		1. Expected Return on Equity (ROE) Calculation Using CAPM	(10)
		To calculate the expected return on equity (ROE) for BlueChip Tech post-expansion using the Capital Asset Pricing Model (CAPM), we first need to estimate the cost of equity and then consider how the expansion impacts the company's leverage and overall cost of capital. The CAPM formula is:	
		Cost of Equity = Risk-Free Rate + (Beta×Market Risk Premium)	
		Cost of Equity=Risk-Free Rate+(Beta×Market Risk Premium)	
		Given:	
		Risk-Free Rate = 2%	
		Beta of BlueChip Tech = 1.2	
		Market Risk Premium = 5%	
		Let's calculate the cost of equity first.	
		Cost of Equity Calculation	
		Cost of Equity =2% + (1.2×5%)	
		Cost of Equity=2%+(1.2×5%)	
		Cost of Equity=2%+6%=8%	
		Cost of Equity=2%+6%=8%	
		The cost of equity, or the expected return on equity, is 8%.	
		Considering Leverage and Cost of Capital	
		Post-expansion, the company plans to maintain its debt-to-equity ratio constant while financing the $200 million investment through a mix of equity and long-term bonds. Assuming the debt-to-equity ratio remains constant, the additional debt and equity raised would proportionally increase the	

company's total capital, impacting its overall cost of capital.

However, without specific rates for the new debt and the proportion of debt and equity used in financing, we'll focus on the calculated cost of equity as the expected ROE under the CAPM framework.

2. Potential Risks and Use of Financial Derivatives

Market and Operational Risks:

Market Risks: Include currency fluctuations that can affect the cost of importing materials and repatriating profits. Interest rate fluctuations also pose a risk to the cost of borrowing.

Operational Risks: Can arise from setting up operations in a new market, such as supply chain disruptions, regulatory compliance challenges, and potential political instability in Southeast Asia.

Mitigating Risks with Financial Derivatives:

Currency Risk Mitigation: BlueChip Tech can use currency forwards, futures, or options to hedge against unfavorable currency movements. For example, entering into a forward contract to lock in the exchange rate for repatriating profits or for future import payments can protect against currency depreciation.

Interest Rate Risk Mitigation: Interest rate swaps or options can be utilized to manage exposure to interest rate fluctuations. An interest rate swap could allow BlueChip Tech to exchange variable interest rate payments for fixed-rate payments, reducing uncertainty about future interest costs.

By strategically using these derivatives, BlueChip Tech can mitigate financial risks associated with currency and interest rate fluctuations, ensuring more predictable financial outcomes as it expands into Southeast Asia. This approach allows the company to focus on operational excellence and market penetration without undue concern over financial market volatility.

SET 1

UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EF 01
Course Name: Project Finance

Max. Marks: 60		Duration: 3 Hours

<div align="center">PART A</div>

		Answer all questions, each carries 2 marks.	Marks
1		Define a project and list two of its essential characteristics.	(2)
2		Explain how venture capital financing differs from traditional debt financing in terms of risk and return for a startup company.	(2)
3		Briefly explain the difference between technical feasibility and techno-economic feasibility in the context of project evaluation.	(2)
4		Identify and briefly describe two types of external stakeholder-related risks that a project might face.	(2)
5		Outline two key aspects of financial analysis that are crucial for valuing a company.	(2)

<div align="center">PART B</div>

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Explain the difference between a pre-feasibility study and a feasibility study in the context of project preparation. Include at least one key purpose of each study.	(4)
7		A company is considering an investment in a project with an initial cost of INR 2,00,000. The project is expected to generate cash inflows of INR 60,000 in Year 1, INR 80,000 in Year 2, and INR 1,20,000 in Year 3. Assuming a discount rate of 12%, calculate the project's Net Present Value (NPV).	(4)
8		Discuss the rationale behind Social Cost Benefit Analysis (SCBA) and explain how the UNIDO approach to SCBA differs from Little and Mirrlees' approach.	(4)
9		Explain how internal risks, specifically from project team members and top-management, can affect a project's outcome. Provide one mitigation strategy for each type of risk.	(4)
10		Consider a project that involves the development and launch of a new technology product. Analyze the potential project-related risks, including technological and logistic risks, and event-related risks, such as those arising from economic or sociopolitical events. For each type of risk identified, propose a risk management strategy that includes both mitigation and contingency planning.	(4)
11		Discuss the role of qualitative information in the financial valuation of a firm and how it complements quantitative data. Provide an example of how	(4)

		qualitative analysis could impact the valuation outcome.	
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
1 2		Consider a hypothetical project to establish a solar power plant in India. Discuss the process and documentation required to obtain the necessary environmental clearance and any one other critical license. Include in your discussion the potential financial and social aspects that should be appraised during the project's feasibility study.	(8)
1 3		Consider a startup aiming to launch a new app-based service in India, seeking funding through a mix of equity shares, venture capital, and a government startup scheme. Outline a financial plan that includes: a brief estimation of the project's cost, proposed means of financing (mentioning the proportion of equity, venture capital, and expected government support), and a basic projection of cash flows for the first three years. Additionally, evaluate the project's feasibility by calculating its Net Present Value (NPV) assuming a discount rate of 10% and expected annual cash flows of INR 50,000 in Year 1, INR 70,000 in Year 2, and INR 100,000 in Year 3.	(8)
1 4		Given a hypothetical project for constructing a new highway that involves a Public-Private Partnership (PPP), outline the possible forms this partnership might take. Include an analysis of potential problems and issues that could arise, considering the technical feasibility and social cost-benefit perspectives. Additionally, propose guidelines that should be followed to ensure the project's techno-economic feasibility and successful implementation.	(8)
1 5		Given a mid-sized manufacturing firm with an initial investment of $500,000, expected annual cash flows of $100,000 for the next 7 years, and a discount rate of 8%, perform a financial valuation. Briefly outline your analytical approach, focusing on key financial data collection and analysis. Discuss the integration of critical thinking and innovation in addressing challenges. Justify your valuation conclusion with a calculation of the firm's Net Present Value (NPV).	(8)
1 6		Discuss the importance of understanding a firm's business model and industry dynamics in the financial valuation process. Explain how these qualitative factors can influence the quantitative valuation outcomes. Illustrate your answer with examples of how market competition, regulatory changes, and technological innovation can impact the valuation of a firm. Additionally, assess the role of scenario analysis in capturing the range of possible future outcomes in valuation.	(8)
		PART D (Compulsory Question, 10 marks)	
1 7		EcoVoyage Resort Development EcoVoyage, a company specializing in eco-friendly tourism, plans to develop a new resort on the coast of Goa, India. The project aims to offer sustainable accommodation options, utilizing renewable energy sources, and promoting conservation practices among tourists. The development is projected to cost approximately $50 million, with anticipated funding through a mix of equity, green bonds, and potential government grants designed to support sustainable tourism projects. The resort's unique selling proposition (USP) includes eco-friendly construction materials, solar-powered energy systems, rainwater harvesting, and partnerships with local communities for cultural tours. The Goa location was selected due to its popularity with tourists and the local government's support for sustainable development initiatives. Preliminary market research suggests a growing demand for sustainable tourism options among international and domestic travelers. EcoVoyage has completed a pre-feasibility study, which confirms the technical feasibility of the project. The study highlights the resort's potential for positive environmental impact and strong appeal to a niche market of eco-conscious travelers. However, the project faces potential risks from seasonal tourism fluctuations, regulatory changes in environmental policies,	(10)

		and the challenge of maintaining operational sustainability standards.	
		To move forward, EcoVoyage is preparing a detailed project report, including a financial analysis to estimate the project's cost, projected cash flows, and valuation. The company is also exploring arrangements for funds, considering traditional and alternative sources of financing while navigating the process for obtaining necessary licenses and clearances in India. **Questions:** A. Financial Analysis Approach: Based on EcoVoyage's project description, outline a financial analysis strategy that incorporates estimation of project costs, means of financing, and appraisal criteria such as NPV, IRR, PI, PBP, and ARR. How should the company factor in the project's unique aspects and potential government incentives in their financial planning? B. Project Appraisal and Sustainability Consideration: Considering the eco-friendly nature of the resort, discuss the importance of integrating a techno-economic feasibility study with a social cost-benefit analysis. How can EcoVoyage leverage Public-Private Partnerships (PPP) and government schemes to enhance the project's viability and impact?	

SET 1		
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)		
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR		
Course Code: BUS 4EF 01		
Course Name: Project Finance		
Max. Marks: 60		Duration: 3 Hours
PART A		
Answer all questions, each carries 2 marks.		Marks
1	A project is a temporary endeavour undertaken to create a unique product, service, or result. Two essential characteristics of a project include Definiteness, Uniqueness. Explanation – 2 marks	(2)
2	Definition of Venture capital and traditional debt. Mention at least one difference – 2 marks	(2)
3	Technical Feasibility: Assesses whether a project is feasible within the current technological capabilities and whether the project team can convert ideas into working systems or products. Techno-Economic Feasibility: It includes analysis of costs, revenues, investment requirements, and financial viability alongside the technical aspects. – 2 marks	(2)
4	Market Risk: This involves changes in market conditions, such as demand fluctuations, competition intensity, or price volatility, which can impact the project's success. Regulatory Risk: Changes in laws, regulations, or government policies that could affect the project's execution or profitability, including new licensing	(2)

		requirements or environmental regulations. – 2 marks	
5		Cash Flow Analysis: Involves examining the cash inflows and outflows to assess the company's liquidity, operational efficiency, and long-term viability.	(2)
		Ratio Analysis: Utilizes various financial ratios to evaluate the company's financial health, performance, and risk profile. – 2 marks	

<table>
<tr><td colspan="4" align="center">PART B</td></tr>
<tr><td colspan="4" align="center">Answer any FOUR questions from this section. Each question carries 4 marks.</td></tr>
<tr><td>6</td><td></td><td>A pre-feasibility study is an initial assessment to determine whether a project idea is worth pursuing, focusing on a high-level evaluation of the project's viability, including basic cost estimates and potential market demand. Its key purpose is to screen out unviable projects before significant resources are committed. – Explanation 4 marks</td><td>(4)</td></tr>
<tr><td>7</td><td></td><td>The Net Present Value INR 2,760.57 – 3 marks

 This positive NPV indicates that the project is expected to generate a return above the cost of capital, suggesting it could be a financially viable investment. – Explanation 1 mark</td><td>(4)</td></tr>
<tr><td>8</td><td></td><td>SCBA is a methodology used to evaluate the economic worth of a project by considering not only its financial impacts but also its social costs and benefits. The rationale behind SCBA is to ensure that projects contribute positively to social welfare and are aligned with broader societal goals. Explain UNIDO and Little Mirlees Approach in brief – 4 marks</td><td>(4)</td></tr>
<tr><td>9</td><td></td><td>Define internal risk and explain one mitigation strategy – 2 marks

Define top management risk and explain one mitigation strategy – 2 marks</td><td>(4)</td></tr>
<tr><td>1
0</td><td></td><td>Technological Risks: Might include rapid technology obsolescence or development challenges.

Logistic Risks: Could be related to supply chain disruptions or delivery delays.

Economic Risks: Include market downturns affecting demand.

Sociopolitical Risks: Such as regulatory changes or political instability – Any four points 4 marks</td><td>(4)</td></tr>
<tr><td>1
1</td><td></td><td>Qualitative information, such as management quality, brand strength, or competitive position, plays a crucial role in financial valuation by providing context to the numbers and helping to assess the company's future prospects. – Explanation 4 marks</td><td>(4)</td></tr>
<tr><td colspan="4" align="center">PART C</td></tr>
<tr><td colspan="4" align="center">Answer any THREE questions from this section. Each question carries 8 marks</td></tr>
<tr><td>1
2</td><td></td><td>Obtaining environmental clearance in India for a solar power plant involves a detailed process under the Environmental Impact Assessment (EIA) Notification, 2006. The process includes submitting an application to the Ministry of Environment, Forest and Climate Change (MoEFCC), along with a detailed project report (DPR) that outlines the project's potential environmental impacts and mitigation measures. Documentation required includes the EIA report, public hearing details, and compliance with specific environmental norms. Another critical license could be the land acquisition and use permission from the state government, requiring documentation of land ownership, land use change (if applicable), and approval from state-level environmental authorities.- 4 marks

Financial aspects to be appraised include the initial capital outlay, operational costs, expected return on investment (ROI), and break-even analysis. Social aspects might involve assessing the project's impact on local communities, employment generation, and contribution to sustainable development goals. – 4 marks</td><td>(8)</td></tr>
<tr><td>1
3</td><td></td><td>The startup's financial plan could involve an initial project cost estimation of INR 5,00,000. The financing mix might include 40% equity shares, 40% venture capital, and 20% government startup scheme support. This mix balances the startup's need to maintain control while also securing sufficient</td><td>(8)</td></tr>
</table>

		funding.	
		For the NPV calculation, let's proceed with the given cash flows and discount rate. For the startup aiming to launch a new app-based service in India, the Net Present Value (NPV) is approximately INR -321,562.73. This negative NPV suggests that, given the initial investment and projected cash flows at a discount rate of 10%, the project may not generate a return above the cost of capital under the given assumptions. This indicates potential financial feasibility concerns that the startup needs to address, possibly by revising its business model, reducing costs, or seeking higher revenue projections.	
		Solution to the problem 7 marks and explanation 1 mark	
14		Explanation to the first part – 4 marks	(8)
		Explanation to the second part – 4 marks	
15		NPV is $20,637.01. – 7 marks	(8)
		This positive NPV indicates that the project is expected to generate a return above the cost of capital, suggesting financial viability and a potentially profitable investment. – 1 mark	
16		There are four questions. Each question can be allotted with 2 marks provided the student has given reasonable explanation.	(8)
		PART D (Compulsory Question)	
17		A. Financial Analysis Approach for EcoVoyage:	(10)
		Estimation of Project Costs	
		Means of Financing	
		Appraisal Criteria	
		Incorporating Unique Aspects and Government Incentives	
		B. Project Appraisal and Sustainability Consideration:	
		Techno-Economic Feasibility	
		Social Cost-Benefit Analysis	
		Leveraging PPP and Government Schemes	
		Explanation to Question A – 5 marks	
		Explanation to Question B – 5 marks	

SET 1	

UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EF 02

Course Name: Behavioural Finance

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Describe Expected Utility Theory	(2)
2		Explain the term Cognitive dissonance	(2)
3		What do you mean by heuristics? Give an example	(2)
4		Discuss the term value investing	(2)
5		Explain Neuro finance	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Explain ambiguity aversion with example.	(4)
7		Interpret Ellsberg's Paradox.	(4)
8		Discuss the types of investors based on risk appetite and style of investing	(4)
9		Analyze the different types of cognitive biases.	(4)
10		Explore the impact of the status quo bias on investment decision-making	(4)

1 1		In the context of financial markets, how do fear and greed manifest as behavioral biases among investors, and what implications do these emotions have on market dynamics and decision-making?	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
1 2		Assess Efficient Market Hypothesis and its challenges.	(8)
1 3		Illustrate how various cognitive biases influence investor decision making.	(8)
1 4		Analyze financial behaviour stemming from familiarity and related biases.	(8)
1 5		Explain various forms of over confidence.	(8)
1 6		Describe the role of gender and personality type on investor behaviour.	(8)
		PART D (Compulsory Question, 10 marks)	
1 7		Apply the principles of behavioral finance to assess the underlying factors contributing to the formation of stock market bubbles. Explore how psychological biases and investor behavior interact to create and sustain these bubbles, and analyze real-world examples to illustrate the behavioral dynamics driving such market phenomena.	(10)

		SET 1			
		Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)			
		UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR			
		Course Code: BUS 4EF 02			
		Course Name: Behavioural Finance			
Max. Marks: 60				Duration: 3 Hours	
		PART A			
		Answer all questions, each carries 2 marks.		Mark s	
1		Decision-making model maximizing expected satisfaction, balancing risks and preferences for rational choices – 2 marks		(2)	
2		Psychological discomfort from conflicting beliefs, leading to efforts for alignment or resolution – 2 marks		(2)	
3		Mental shortcuts simplifying decision-making. Example: using rules of thumb for quick problem-solving – 2 marks		(2)	
4		Strategy buying undervalued assets for long-term growth, based on fundamental analysis and patience – 2 marks		(2)	

5		Integrating neuroscience with finance to understand and analyze decision-making processes in investment behavior – 2 marks	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Preferring known risks over uncertain outcomes. Example: choosing a fixed payment over lottery. (Ambiguity – 2 marks; Example – 2 marks)	(4)
7		People prefer known probabilities over unknown, revealing ambiguity aversion in decision-making under uncertainty – reasonable explanation – 4 marks	(4)
8		Conservative seeks stability, moderate balances, aggressive pursues growth; diversify based on risk preferences – Listing the types – 1 mark each; explanation -1 mark	(4)
9		Mental shortcuts affecting judgment. Examples include confirmation bias, anchoring, and overconfidence in decisions – Explanation with example 4 marks	(4)
10		Resisting change in investment choices, limiting adaptability and potentially hindering optimal decisions – 4 marks	(4)
11		Fear and greed drive market volatility as investors overreact or underreact, impacting prices and decisions. – explanation with examples – 4 marks	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		Explanation of EMH – 4 marks; Mention any three challenges – 4 marks	(8)
13		Cognitive biases shape investor choices; examples include overconfidence, anchoring, and loss aversion, impacting decision-making strategies – 8 marks	(8)
14		Familiarity bias leads to overinvestment in familiar assets, neglecting diversification, and ignoring potential risks – explanation with examples 8 marks	(8)
15		Various forms of overconfidence include overestimating one's knowledge, abilities, and the accuracy of predictions – Explanation with examples 8 marks	(8)
16		Gender and personality type influence investor behavior by shaping risk tolerance, decision-making styles, and investment preferences - explanation with examples 8 marks	(8)
		PART D (Compulsory Question)	
17		Apply the principles of behavioral finance to explain stock market bubbles by mentioning biases and heuristics– 4 marks Psychological biases and investor behavior interact to create and sustain these bubbles with examples and explanations – 6 marks	(10)

SET 1
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 4EF 03
Course Name: Strategic Financial Management

Max. Marks: 60		Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		Identify two components of the strategic planning process in Strategic Financial Management (SFM) and briefly explain their significance in enhancing organizational performance.	(2)
2		Define the concept of sensitivity analysis in the context of investment decision-making and provide an example of how it can be applied to evaluate the feasibility of a project.	(2)
3		Explain any 2 defensive strategies in hostile takeovers	(2)
4		Describe the rationale behind utilizing the management buyout (MBO) technique as a form of corporate restructuring, and discuss its potential	(2)

		advantages for both management and investors.	
5		List out the techniques used in the valuation of shares.	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Analyze the importance of each component of the strategic planning process in Strategic Financial Management (SFM) and evaluate how effectively incorporating these components can contribute to achieving organizational goals and enhancing competitive advantage.	(4)
7		Compare and contrast the Risk-Adjusted Discount Rate (RADR) method and the Simulation Method as techniques for investment decision-making. Evaluate the strengths and limitations of each method, and discuss their suitability in different investment scenarios.	(4)
8		Discuss how firms can get tax benefits under merger transactions.	(4)
9		ICICI bank took birth as a result of reverse merger between itself and its parent ICICI. Examine the statement in the light of the concept of reverse merger.	(4)
1 0		Enumerate the reasons for the failure of the joint venture.	(4)
1 1		Discuss the assumptions of Black Scholes model.	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

1 2		Define Strategic Financial Management (SFM) and briefly explain its significance in modern business contexts.	(8)
1 3		Assess the significance of the Certainty Equivalent Factor in investment decision-making. Explain how it addresses risk aversion among investors and discuss its role in determining the attractiveness of investment opportunities.	(8)
1 4		Evaluate the motives driving cross-border mergers and acquisitions (M&A) in the contemporary global business landscape. Additionally, discuss the potential challenges and risks associated with cross-border M&A activities, and propose strategies for mitigating these challenges to ensure the success and sustainability of such transactions.	(8)
1 5		What is LBO? What are the stages of LBO operations?	(8)
1 6		A company paid a cash dividend of Rs. 40 per share on its stock during the year. The investors expect a return of 14% on company shares. How would you value the company if the earnings on the company are expected to grow at a) 8% b)10%	(8)

PART D (Compulsory Question, 10 marks)

1 7		Large company is acquiring small company on a exchange basis. Their selected data are as follows:	(10)

	Large Company	Small Company
Profit after tax (Rs. In lakhs)	56	21
Number of Shares	10	8.4
EPS (Rs.)	5.6	2.5
Price-earnings ratio	12.5	7.5

a) Pre-merger market value per share
b) The maximum exchange ratio large company should offer without the dilution of (1) EPS (2)Market value per share.

SET 1			
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)			
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR			
Course Code: BUS 4EF 03			
Course Name: Strategic Financial Management			
Max. Marks: 60			Duration: 3 Hours
PART A			
	Answer all questions, each carries 2 marks.		Marks
1		Identification of two components: 1 mark	(2)

		Explanation of their significance: 1 mark	
2		Definition of sensitivity analysis: 1 mark Application/example provided: 1 mark	(2)
3		Explanation of each defensive strategy: 1 mark each	(2)
4		Explanation of the rationale: 1 mark Discussion of advantages: 1 mark	(2)
5		List of techniques provided: 1 mark Correct identification of relevant valuation techniques: 1 mark	(2)

<table>
<tr><td colspan="4" align="center">PART B</td></tr>
<tr><td colspan="4" align="center"><i>Answer any FOUR questions from this section. Each question carries 4 marks.</i></td></tr>
<tr><td>6</td><td></td><td>Identification and analysis of each component: 2 marks

Evaluation of how incorporating these components can contribute to achieving organizational goals and enhancing competitive advantage: 2 marks</td><td>(4)</td></tr>
<tr><td>7</td><td></td><td>Comparison and contrast of RADR method and Simulation Method: 2 marks

Evaluation of strengths and limitations of each method: 2 marks</td><td>(4)</td></tr>
<tr><td>8</td><td></td><td>Explanation of tax benefits available in merger transactions: 2 marks

Discussion of how firms can obtain these tax benefits: 2 marks</td><td>(4)</td></tr>
<tr><td>9</td><td></td><td>Explanation of the concept of reverse merger: 1 mark

Analysis of ICICI bank's reverse merger with its parent ICICI: 3 marks</td><td>(4)</td></tr>
<tr><td>10</td><td></td><td>Identification and enumeration of reasons for failure: 3 marks

Concise explanation of each reason: 1 mark</td><td>(4)</td></tr>
<tr><td>11</td><td></td><td>Identification and explanation of assumptions: 3 marks

Concise discussion of the significance of these assumptions: 1 mark</td><td>(4)</td></tr>
<tr><td colspan="4" align="center">PART C</td></tr>
<tr><td colspan="4" align="center"><i>Answer any THREE questions from this section. Each question carries 8 marks</i></td></tr>
<tr><td>12</td><td></td><td>Clear definition of SFM: 2 marks

Explanation of SFM's significance in modern business contexts: 6 marks</td><td>(8)</td></tr>
</table>

1 3		Explanation of CE's significance: 2 marks Discussion on how CE addresses risk aversion among investors: 3 marks Analysis of CE's role in determining the attractiveness of investment opportunities: 3 marks	(8)
1 4		Analysis of motives driving cross-border M&A: 2 marks Discussion of potential challenges and risks associated with cross-border M&A: 3 marks Proposal of strategies for mitigating challenges: 3 marks	(8)
1 5		Definition of LBO: 2 marks Explanation of stages of LBO operations: 6 marks	(8)
1 6		Calculation of the present value of dividends: 4 marks Explanation of the valuation process with both growth rates: 4 marks	(8)
		PART D (Compulsory Question)	

1 7		a) Pre-merger market value per share (10 marks):
		
		  • Calculation of pre-merger market value per share for both companies: 2.5 marks
		
		  • Explanation of the calculation method used: 1.5 marks
		
		  • Interpretation of the calculated values: 1 marks
		
		b) Calculation of the maximum exchange ratio for large company without dilution of EPS and market value per share (each part carries 10 marks):
		
		  • Explanation of the concept of dilution and its relevance to EPS and market value per share: 1 marks
		
		  • Calculation of the maximum exchange ratio without dilution of EPS: 2 marks
		
		  • Calculation of the maximum exchange ratio without dilution of market value per share: 2 marks
			(10)

	SET 1	
	UNIVERSITY OF CALICUT FOURTH SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR	
	Course Code: BUS 4EF 04	
	Course Name: International Finance	
Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Cite any two benefits of international trade.	(2)
2		Define Balance of trade and state significance.	(2)
3		Is it accurate to say that hedging is a strategy designed to generate profits? Support your response with an explanation.	(2)
4		Explain the significance of an insurance cover note in the context of international trade.	(2)
5		State any two government organizations commonly involved in promoting exports and providing support to businesses engaged in international trade.	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Discuss the various barriers to international trade, providing detailed explanations for each.	(4)
7		Examine the significance of pre-shipment and post-shipment finance in the context of international trade.	(4)
8		Discuss the role of ECGC in supporting international trade, highlighting its major functions.	(4)
9		Explain the importance of Risk-Covering Documents in ensuring a seamless and secure global trade environment.	(4)
10		Provide a concise overview of the services offered in marketing assistance for the promotion of exports.	(4)
11		Discuss how the export incentives measures contribute to enhancing the competitiveness of businesses engaged in international trade.	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

1 2		Explain the components of Balance of Payment.	(8)
1 3		Briefly describe the role of EXIM bank in supporting exports from India.	(8)
1 4		Explain any two theories that held forecast foreign exchange rates.	(8)
1 5		Company XYZ, engaged in international trade, is concerned about the potential impact of exchange rate variations on its financial performance. Explore and discuss the various tools available for hedging against exchange rate fluctuations. How can Company XYZ strategically use these tools to mitigate currency risk and ensure stable financial outcomes in its global transactions?	(8)
1 6		Discuss and elaborate on the diverse range of government-supported export promotion schemes and incentives.	(8)
		PART D (Compulsory Question, 10 marks)	
1 7		Company TechGlobal in Country A specializes in manufacturing IT equipment and is planning to export a batch of high-tech products to Company InnovateTech in Country B. Navigate the financial documents, commercial documents, transport documents, risk-covering documents, and official documents involved in this international trade transaction. Briefly explain the purpose of each document and how they contribute to the success of the export process.	(10)

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT FOURTH SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 4EF 04
Course Name: International Finance

Max. Marks: 60			Duration: 3 Hours
PART A			
		Answer all questions, each carries 2 marks.	Mark s
1		Any two benefits of international trade- 1 mark each	(2)
2		Definition- 1 mark Significance – 1 mark	(2)
3		No. Hedging is for risk management and the primary purpose is to reduce risk	(2)
4		Risk mitigation and Trade facilitation - 1 mark each	(2)
5		any two government organizations and role of each – 1 mark each	(2)
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		Tariff and non-tariff barriers- 2 marks each	(4)
7		significance of pre-shipment significance of post-shipment finance – 2 marks for each	(4)
8		Major functions of ECGC - 2 major functions and their significance – 2 marks each	(4)

9		Risk-Covering Documents Insurance Policy, Insurance Cover Note – 2 marks each	(4)
1 0		Overview of the services offered in marketing assistance for the promotion of exports.	(4)
1 1		Discuss how the export incentives measures contribute to enhancing the competitiveness of businesses engaged in international trade.	(4)

<table>
<tbody>
<tr><td colspan="4" align="center">PART C</td></tr>
<tr><td colspan="4" align="center">Answer any THREE questions from this section. Each question carries 8 marks</td></tr>
</tbody>
</table>

1 2		Current Account –4 marks Capital Account 4 marks	(8)
1 3		Any four functions of EXIM bank in detail – 2 marks each	(8)
1 4		Any two theories- each theory 4 marks	(8)
1 5		Forwards- 2 marks Futures – 3 marks Options- 3 marks	(8)
1 6		Any four government-supported export promotion schemes and incentives.- 2 marks each	(8)

<table>
<tbody>
<tr><td colspan="4" align="center">PART D (Compulsory Question)</td></tr>
</tbody>
</table>

1 7		Financial documents, commercial documents, transport documents and official documents involved in this international trade transaction and the purpose of each document Importance of documents in international trade in general – 2 marks. Brief explanation of at least 2 of each type – 8 marks (2 per type)	(10)

<table>
<tbody>
<tr><td colspan="4" align="center">SET 1</td></tr>
<tr><td colspan="4" align="center">UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR</td></tr>
<tr><td colspan="4" align="center">Course Code: BUS 4EF 05</td></tr>
<tr><td colspan="4" align="center">Course Name: Financial Derivatives</td></tr>
<tr><td>Max. Marks: 60</td><td></td><td></td><td align="right">Duration: 3 Hours</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="4" align="center">PART A</td></tr>
<tr><td colspan="3" align="center">Answer all questions, each carries 2 marks.</td><td>Mark

s</td></tr>
<tr><td>1</td><td colspan="2">Define derivatives. What do you mean by interest rate derivative?</td><td align="center">(2)</td></tr>
<tr><td>2</td><td colspan="2">What do you mean by commodity futures?</td><td align="center">(2)</td></tr>
<tr><td>3</td><td colspan="2">Define Mark to Market Margin</td><td align="center">(2)</td></tr>
<tr><td>4</td><td colspan="2">Mention the important contract terminologies relating to Stock Options.</td><td align="center">(2)</td></tr>
<tr><td>5</td><td colspan="2">What is credit risk?</td><td align="center">(2)</td></tr>
<tr><td colspan="4" align="center">PART B</td></tr>
<tr><td colspan="4" align="center">Answer any FOUR questions from this section. Each question carries 4 marks.</td></tr>
<tr><td>6</td><td colspan="2">Mr. Rohit is a derivative trader since last 03 years. He has entered into a Futures contract, where the underlying asset is the stock of Libra Tech. On 4th October 2023, he took a long position. The stock Futures was traded at Rs. 2200 at that time. The lot size is 300 and the margin is 20%. The closing prices of the Futures for next 5 days are given below.</td><td align="center">(4)</td></tr>
</tbody>
</table>

Date	4th October	5th October	6th October	7th October	8th October
Closing Price (Rs.)	2140	2168	2289	2253	2247

		Calculate the initial margin requirement and make the Mark to Market adjustment in the margin account of Mr. Rohit.	
7		Explain the difference between hedging, arbitrage and speculation.	(4)
8		A stock index currently stands at 350. The risk-free interest rate is 8% per annum (with continuous compounding) and a dividend yield on the index is 4% per annum. What should the future price for a four-month contract be?	(4)
9		Define a forward contract and explain at least one feature that makes it different from a futures contract.	(4)
10		What are the various risks involved in derivatives?	(4)
11		Distinguish between: (i) Call option and put option (ii) Intrinsic value option and time value option (iii) American option and European option.	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		Define a swap. Distinguishes a currency swap from an interest rate swap	(8)
13		What is the regulatory framework governing derivatives trading in India, and how does it ensure market integrity and investor protection?	(8)
14		Explain why a bank is subject to credit risk when it enters in two offsetting swap contracts?	(8)
15		Under what circumstances are (a) a short hedge and (b) a long hedge appropriate	(8)
16		Mr. George has been in the futures and option trading since last 05 years. He has been into many stock options and makes profit and loss. Recently, he came to know about option pricing. Hence, he wanted to apply the option pricing model to choose the stock options from the market. He picked one call option, where the underlying stock price is Rs. 500 details of the option are given below:	(8)

Option type	European
Strike price	Rs. 460
Duration	03 months
Standard deviation	0.2
Risk-free rate p.a.	7%

In the above situation, he is confused to buy this call option or not. Hence, in this situation, as a financial analyst in option market suggest and analyse the following points:

(a) Evaluate the call option value by applying the Black Scholes model.

		PART D (Compulsory Question, 10 marks)	
17		Imagine that you are the treasurer of a Japanese Company exporting electronic equipment to the United States. Discuss how would you design a foreign exchange hedge strategy and the argument you used to sell that strategy to your fellow executives.	(10)

SET 1		
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)		
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR		
Course Code: BUS 4EF 05		
Course Name: Financial Derivatives		
Max. Marks: 60		Duration: 3 Hours
PART A		
	Answer all questions, each carries 2 marks.	Mark s
1	Derivatives are financial instruments whose value is derived from the value of an underlying asset, index, or rate Interest rate derivatives are a type of derivative whose value is based on interest rates or interest rate benchmarks. – 2 marks	(2)
2	Commodity futures are standardized contracts traded on organized exchanges, specifying the purchase or sale of a specific quantity of a commodity at a predetermined price on a future date. – 2 marks.	(2)
3	Mark to Market margin or MTM margin is the collateral required by a broker or an exchange to ensure that traders can cover their potential losses. – 2 marks	(2)

| | | | | | (2) |

4		**Strike Price**: The predetermined price at which the underlying asset can be bought or sold when exercising the option. **Expiration Date**: The date at which the option contract expires, after which it becomes invalid. **Option Type**: Whether the option is a call option (giving the holder the right to buy the underlying asset) or a put option (giving the holder the right to sell the underlying asset). **Premium**: The price paid by the option buyer to the option seller for the right conveyed by the option contract. Each point carries 0.5 marks	(2)
5		Credit risk is the probability of a financial loss resulting from a borrower's failure to repay a loan. – 2 marks	(2)

<div align="center">

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

</div>

6		Answer:	(4)

Date	Reference Price	Closing Price	Lot Size	Daily M2M
4th October	2200	2140	300	-18000
5th October	2140	2168	300	8400
6th October	2168	2289	300	36300
7th October	2289	2253	300	-10800
8th October	2253	2247	300	-1800

The total initial margin requirement is Rs. 1,32,000. – Two marks for calculation and 2 marks for final answer

7		Explanation on Hedging, Arbitrage and Speculation – 2 marks Mention any one difference between these three – 2 marks	(4)

8			(4)

To calculate the futures price of the stock index, you can use the cost-of-carry model, which considers the current index price, the risk-free interest rate, and the dividend yield.

The formula for the futures price (F) is:

$$F = S \times e^{(r-q) \times T}$$

Where:

- S = Current spot price of the index

- r = Risk-free interest rate (in decimal form)

- q = Dividend yield (in decimal form)

- T = Time to expiration (in years)

Given:

- S=350S=350

- r=0.08r=0.08 (8% per annum)

- q=0.04q=0.04 (4% per annum)

| | | • T=412T=124 (four months to expiration, expressed in years)

Let's plug these values into the formula:

$F=350×e(0.08−0.04) ×412F=350×e(0.08−0.04)×124$

$F=350×e0.04×13F=350×e0.04×31$

$F=350×e0.013333F=350×e0.013333$

$F≈350×1.0134F≈350×1.0134$

$F≈354.19F≈354.19$

So, the futures price for a four-month contract should be approximately 354.19.

$350_e{}^{(0.08-0.04)0.3333} = 354.19$ | |
|---|---|---|---|
| 9 | | Forward Contract:

A forward contract is a private, bilateral agreement between two parties to buy or sell an asset at a specified price on a future date.

One key feature that distinguishes forward contracts from futures contracts is their customization and flexibility

Definition – 2 marks; Difference – 2 marks | (4) |
| 10 | | Market Risk, Credit Risk, Liquidity Risk, Operational Risk – Each point carries 1 mark | (4) |
| 11 | | Call Option vs. Put Option: The primary difference is in the direction of the right conveyed by the option. A call option gives the holder the right to buy, while a put option gives the holder the right to sell the underlying asset.

Intrinsic Value Option vs. Time Value Option: For a call option, intrinsic value exists when the market price is above the strike price; for a put option, it exists when the market price is below the strike price. The time value of an option is the portion of its premium that exceeds its intrinsic value. It reflects the value attributed to the possibility of the option gaining intrinsic value before expiration. Intrinsic value represents the realizable value of the option based on the current market price, while time value represents the potential value that may be realized before expiration due to changes in market conditions.

American Option vs. European Option: The key difference lies in the exercise rights of the option holder. American options offer early exercise opportunities, while European options restrict exercise to the expiration date only.

Each difference carries 1 mark and reasonable explanation – 1 mark | (4) |
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		A swap is a financial contract between two parties to exchange cash flows or other financial instruments over a specified period. The most common types of swaps are interest rate swaps and currency swaps. Interest Rate Swap is an agreement between two parties to exchange interest rate cash flows based on a specified principal amount. Typically, one party pays a fixed	(8)

		interest rate while the other pays a floating (variable) interest rate. Interest rate swaps are used to manage interest rate risk, hedge against interest rate fluctuations, or modify the interest rate exposure of debt or investment portfolios. In an interest rate swap, one party may agree to pay a fixed interest rate of 5% in exchange for receiving the floating LIBOR rate from the other party. A currency swap is an agreement between two parties to exchange principal amounts and periodic interest payments denominated in different currencies. Explanation – 8 marks	
1 3		In India, derivatives trading is regulated by the Securities and Exchange Board of India (SEBI), which is the primary regulatory authority overseeing the securities and commodities markets. Derivatives trading takes place on recognized stock exchanges such as the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE). These exchanges have their own rules, bylaws, and regulations governing derivatives trading, including trading procedures, margin requirements, position limits, and surveillance mechanisms to ensure fair and orderly markets. SEBI mandates stringent risk management measures for exchanges and market participants engaged in derivatives trading. SEBI promotes investor education and awareness initiatives to enhance understanding of derivatives products, risks, and market dynamics among investors. Explanation – 8 marks	(8)
1 4		When a bank enters into two offsetting swap contracts, it's exposed to credit risk due to potential default by the counterparties involved. In a swap contract, each party relies on the other to fulfil its contractual obligations. If one counterparty defaults on its obligations, the other party may incur financial losses. In the case of two offsetting swap contracts, if one counterparty defaults, the bank may face losses on one contract while being unable to recover those losses from the defaulting counterparty due to losses incurred on the other contract. Even if the swap contracts are theoretically offsetting, there can be timing differences between the cash flows of the two contracts. If the default occurs at a time when the bank has already made payments under one contract but has not yet received payments under the other contract, it may suffer losses due to the inability to recover the payments made. While netting arrangements can help mitigate credit risk by allowing parties to offset payments owed to each other under multiple contracts, the effectiveness of netting depends on legal enforceability and the willingness of counterparties to honour the netting agreement. In cases of default, the bank may face challenges in enforcing netting agreements and recovering losses.If the counterparties to the swap contracts are interconnected or have similar credit profiles, the bank may face concentration risk. A default by one counterparty may indicate broader systemic issues that could impact other counterparties, increasing the overall credit risk exposure of the bank. Explanation – 8 marks	(8)
1 5		Short and long hedges are risk management strategies used by businesses and investors to protect against adverse price movements in the underlying	(8)

1	asset.	
	A short hedge is appropriate when an entity already holds a physical asset or expects to receive it in the future and wants to protect against a potential decline in its price. This strategy involves taking a short position in a futures contract or selling a call option to lock in a price for selling the asset at a future date. Short hedges are commonly used by producers or suppliers of commodities to hedge against price decreases. For example, a wheat farmer who expects to harvest wheat in the future may enter into a short hedge by selling wheat futures contracts to lock in a price for selling their crop when it's ready for harvest. This protects the farmer against potential declines in wheat prices.	
	A long hedge is appropriate when an entity intends to purchase a physical asset or expects to have a future obligation to buy it and wants to protect against a potential increase in its price. This strategy involves taking a long position in a futures contract or buying a put option to lock in a price for purchasing the asset at a future date. Long hedges are commonly used by consumers or buyers of commodities to hedge against price increases. For example, an airline company that needs to purchase jet fuel in the future may enter into a long hedge by buying jet fuel futures contracts to lock in a price for purchasing the fuel when needed. This protects the airline against potential increases in jet fuel prices.	
	Explanation – 8 marks	
16	Answer:	(8)
	1st Step: Calculation of N(d1)	
	d1=Ln(s/k)+(R+variance/2)*t/S.D*sqrtt	
	d1 = Ln(500/480)+(0.065+0.04/2)*0.25/0.2*sqrt.0.25	
	d1 = (0.0408+0.085*0.25)/0.1	
	d1 = 0.6205	
	Z value of d1 = 0.7324	
	N(d1) = 0.7324	
	2nd Step: Calculation of N(d2)	
	d2 = d1- (Stdev*sqrt(t)	
	d2 = 0.0.6205-0.1	
	d2 = 0.5205	
	N(d2) = 0.6985	
	3rd Step: Calculation of Call option value	
	Call option value = S*N(d1) - (K*e^(-rt)*N(d2)	
	Value = 500*0.7324 - 480*e^(-0.065*0.25)*0.6985	
	Value = 366.2 – 329.87	
	Value = Rs. 36.33	
	Reasonable calculations without final answers – 4 marks	
	Correct calculations and final answer – 8 marks	
	PART D (Compulsory Question)	
17	As the treasurer of a Japanese company exporting electronic equipment to the United States, designing a foreign exchange hedge strategy is crucial to mitigate the risks associated with currency fluctuations between the Japanese yen (JPY) and the US dollar (USD). **Identify Currency Exposure:** Assess the company's currency exposure by analyzing the volume and timing of USD-denominated sales and expenses, such as procurement of raw materials or manufacturing costs. Determine the portion of revenue and expenses exposed to exchange rate fluctuations. Based on the identified	(10)

currency exposure, choose suitable hedging instruments such as forward contracts or currency options to lock in exchange rates for future USD receipts and payments. Consider factors such as cost, flexibility, and effectiveness in mitigating currency risk. Implement a layered hedging approach to manage currency risk over different time horizons. For example, use short-term forward contracts to hedge near-term cash flows and options contracts to hedge longer-term exposures. This provides flexibility to adjust hedging positions as market conditions evolve. Continuously monitor currency markets and assess the effectiveness of the hedging strategy in managing currency risk. Adjust hedge positions as needed based on changes in market conditions, business circumstances, or risk tolerance.

Emphasize the importance of mitigating currency risk to protect the company's financial performance and stability. Highlight the potential impact of currency fluctuations on revenue and profit margins, especially in a highly competitive market like the electronics industry. Explain how implementing a foreign exchange hedge strategy can provide cost certainty by locking in exchange rates for future USD-denominated transactions. This helps stabilize cash flows and budgeting processes, enabling better cost control and financial planning. Position the hedge strategy as a competitive advantage that enhances the company's ability to price products competitively in the US market. By eliminating uncertainty related to currency fluctuations, the company can offer more stable pricing to customers and maintain market share. Link the hedge strategy to the creation of shareholder value by protecting earnings and cash flows from adverse currency movements. Emphasize the importance of preserving profitability and shareholder returns, which ultimately contributes to long-term shareholder value. Highlight that implementing a foreign exchange hedge strategy aligns with best practices in risk management and corporate governance. Demonstrate the company's commitment to prudent financial management and safeguarding shareholder interests.

SPECIALISATION - MARKETING

		SET 1	
		UNIVERSITY OF CALICUT ,,,,,,,,,,,,,, SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR	
		Course Code: BUS 3EM 01	
		Course Name: Retail Management	
Max. Marks: 60			Duration: 3 Hours
		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		What is the significance of the retail industry?	(2)
2		Provide examples of different classifications of retail stores.	(2)
3		Why is store location important in retail?	(2)
4		Explain the concept of category management in retail.	(2)
5		Discuss the components of store design.	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Analyze the future of the Indian retail scenario.	(4)
7		Discuss factors that influence retail shoppers.	(4)
8		Explain the steps involved in choosing a store location.	(4)
9		Evaluate the elements of retail pricing.	(4)
10		Discuss considerations for selecting a layout.	(4)
11		Evaluate the importance of visual merchandising in attracting and retaining customers in the digital age.	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		Evaluate theories of retail development.	(8)
13		Assess the consumer decision-making process in retail.	(8)
1		Analyse factors affecting location decisions.	(8)

4			
1 5		Discuss the process of developing a pricing strategy.	(8)
1 6		Assess the impact of effective retail pricing on consumer behavior and store profitability.	(8)
		PART D (Compulsory Question, 10 marks)	
1 7		The retail industry is undergoing a significant digital transformation. With the rise of e-commerce and changing consumer preferences, traditional brick-and-mortar stores are facing challenges in staying relevant. A leading retail chain, XYZ Mart, is planning to embrace digital technologies to enhance the overall shopping experience and stay competitive. *Situation:* XYZ Mart has decided to implement a comprehensive digital strategy, including online platforms, mobile apps, and in-store technologies. However, there are concerns about the successful adoption of these technologies and the impact on the traditional in-store experience. 1. Discuss how XYZ Mart can seamlessly integrate e-commerce into its existing retail operations. 2. Suggest innovative in-store technologies that XYZ Mart can implement to enhance the shopping experience.	(10)

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EM 01
Course Name: Retail Management

Max. Marks: 60		Duration: 3 Hours

PART A			
	Answer all questions, each carries 2 marks.		Marks
1		• Understanding of the broader role of retail in the economy: 1 mark • Recognition of the impact on business and consumers: 1 mark	(2)
2		• Identification and explanation of at least two classifications: 2 marks	(2)
3		• Understanding the role of location in business success: 1 mark • Recognizing the impact on customer accessibility: 1 mark	(2)
4		• Definition and explanation of category management: 2 marks	(2)
5		• Identification and brief explanation of key components: 2 marks	(2)
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		• Insightful analysis of potential trends and challenges: 3 marks	(4)

		• Consideration of the role of technology and changing consumer behavior: 1 mark	
7		• Identification and explanation of key influencing factors: 3 marks • Discussion on the impact of online and offline factors: 1 mark	(4)
8		• Detailed explanation of the store location decision-making process: 3 marks • Consideration of factors like demographics, competition, etc.: 1 mark	(4)
9		• Comprehensive evaluation of pricing elements: 3 marks • Discussion on the impact of pricing on customer perception: 1 mark	(4)
10		• Identification and explanation of important layout considerations: 3 marks • Discussion on the relationship between layout and customer experience: 1 mark	(4)
11		• In-depth analysis of the role of visual merchandising: 3 marks • Consideration of the impact of digital platforms on visual merchandising: 1 mark	(4)
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		• Critical examination of retail development theories: 5 marks • Application of theories to real-world retail scenarios: 3 marks	(8)
13		• In-depth analysis of the stages and factors influencing consumer decisions: 5 marks • Consideration of the impact of digital channels on decision-making: 3 marks	(8)
14		• Comprehensive analysis of various factors impacting store location decisions: 5 marks • Discussion on the changing dynamics of location factors in the digital era: 3 marks	(8)

1 5		• Detailed explanation of the steps involved in crafting a pricing strategy: 5 marks • Consideration of dynamic pricing and its implications: 3 marks	(8)
1 6		• Thorough assessment of the dual impact on consumer behavior and profitability: 5 marks • Discussion on the role of promotions and discounts in pricing strategies: 3 marks	(8)
		PART D (Compulsory Question)	

1 7		• **Introduction (2 Marks):**
		
		    • Clear articulation of the challenges faced by XYZ Mart: 1 mark
		
		    • Brief overview of the proposed digital transformation strategy: 1 mark
		
		• **Sub-question 1 (3 Marks): Seamless integration of e-commerce into existing retail operations.**
		
		    • Understanding and explanation of integration process: 2 marks
		
		    • Identification of potential challenges and proposed solutions: 1 mark
		
		• **Sub-question 2 (5 Marks): Suggestions for innovative in-store technologies.**
		
		    • Identification and detailed explanation of innovative technologies: 3 marks
		
		    • Evaluation of potential benefits and risks: 2 marks
			(10)

SET 1

UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EM02

Course Name: CONSUMER BEHAVIOUR & MARKETING RESEARCH

Max. Marks: 60		Duration: 3 Hours

PART A		
	Answer all questions, each carries 2 marks.	Marks
1	What is market segmentation, and why is it important in consumer research?	(2)
2	What all factors influence consumer perception?	(2)
3	What are the core elements of culture?	(2)
4	Define Marketing Information System (MIS)	(2)
5	What are some commonly used tools for data analysis?	(2)

PART B		
Answer any FOUR questions from this section. Each question carries 4 marks.		
6	Can you explain how consumer involvement impacts decision-making?	(4)
7	How would you apply the Howard Sheth model to analyze consumer decision-making in a specific market?	(4)

8		Analyze how the family life cycle influences consumer decision-making.	(4)
9		Explain how culture affects the decision-making process of consumers.	(4)
10		Explain the relationship between Marketing Research and decision making in businesses.	(4)
11		Describe situations where non-parametric tests are preferred over parametric tests.	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Evaluate the impact of psychographics on consumer behaviour in different cultural contexts.	(8)
13		Critically evaluate the role of communication channels in shaping consumer behaviour.	(8)
14		Evaluate the effectiveness of existing consumer protection measures in India.	(8)
15		Assess the significance of Marketing Information System in enhancing organizational performance.	(8)
16		Explain the key components of a research report?	(8)

PART D (Compulsory Question, 10 marks)

17		You are a marketing consultant hired by a company that manufactures high-end smartphones. The company has recently launched a new model with cutting-edge features and aims to penetrate a highly competitive market. Your task is to analyze the buying process of potential customers for this new smartphone model, focusing on problem recognition, information search behaviour, alternative evaluation, purchase process, and post-purchase behaviour. Question: a) Using the concepts of the buying process, critically evaluate the factors influencing consumers' decision-making journey in adopting the new smartphone model. b) In your analysis, discuss how consumers recognize the need for a new smartphone, the sources and extent of information search they engage in, the criteria used for evaluating alternative options and the steps involved in the purchase process	(10)

		c) Provide strategic recommendations based on your analysis to enhance the company's marketing efforts and optimize the overall consumer experience. Support your answer with relevant theories and examples.	

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EM02
Course Name: CONSUMER BEHAVIOUR & MARKETING RESEARCH

Max. Marks: 60		Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Mark s
1		• Definition and Explanation: 1 mark • Importance in Consumer Research: 1 mark	(2)
2		• Identification of Factors: 1 mark • Explanation of Influence: 1 mark	(2)

3		• Identification of Core Elements: 1 mark	(2)
		• Brief Explanation of Each Element: 1 mark	
4		• Definition of MIS: 1 mark	(2)
		• Brief Explanation or Purpose: 1 mark	
5		• Identification of Tools: 1 mark	(2)
		• Brief Explanation of Each Tool: 1 mark	

PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		• Definition and explanation of consumer involvement (1 mark)	(4)
		• Explanation of how consumer involvement influences decision-making (2 marks)	
		• Examples or illustrations to support the explanation (1 mark)	
7		• Explanation of the Howard Sheth model (1 mark)	(4)
		• Application of the model to a specific market (2 marks)	
		• Discussion on insights gained from applying the model (1 mark)	
8		• Explanation of the family life cycle (1 mark)	(4)
		• Discussion on how different stages of the family life cycle affect decision-making (2 marks)	
		• Examples or scenarios illustrating the influence (1 mark)	
9		• Definition and explanation of culture (1 mark)	(4)
		• Discussion on how cultural factors influence decision-making (2 marks)	
		• Examples or cases demonstrating cultural impact (1 mark)	
10		• Explanation of Marketing Research (1 mark)	(4)
		• Discussion on how Marketing Research aids decision-making (2 marks)	
		• Examples or instances showing the application of Marketing Research in decision-making (1 mark)	

1 1		• Explanation of non-parametric tests (1 mark) • Discussion on situations where non-parametric tests are preferred (2 marks) • Examples or contexts where non-parametric tests are more suitable (1 mark)	(4)
PART C		
Answer any THREE questions from this section. Each question carries 8 marks		
1 2		• Explanation of psychographics (1 mark) • Analysis of how psychographics influence consumer behaviour (3 marks) • Examination of cultural variations in the impact of psychographics (3 marks) • Examples or case studies demonstrating the influence (1 mark)	(8)
1 3		• Discussion on various communication channels (2 marks) • Evaluation of how different channels influence consumer behaviour (3 marks) • Critical analysis of the effectiveness of communication channels (2 marks) • Examples or case studies illustrating the points (1 mark)	(8)
1 4		• Explanation of existing consumer protection measures (2 marks) • Evaluation of their effectiveness in addressing consumer needs and rights (3 marks) • Critical analysis of gaps or limitations in the current measures (2 marks) • Suggestions for improvement or enhancement (1 mark)	(8)
1 5		• Explanation of Marketing Information System (2 marks) • Discussion on how MIS contributes to organizational performance (3 marks) • Analysis of its significance in decision-making and strategic planning (2 marks) • Examples or case studies demonstrating the impact of MIS (1 mark)	(8)
1 6		• Identification and explanation of key components (2 marks) • Discussion on the importance of each component (3 marks)	(8)

		• Description of how these components contribute to the clarity and usefulness of the report (2 marks) • illustration of well-structured research reports (1 mark)	

		PART D (Compulsory Question)		
1 7		a) Analysis of factors influencing consumers' decision-making journey in adopting the new smartphone model (3 marks): b) Understanding and explanation of the buying process concepts (3 marks) c) Discussion on strategic recommendations based on the analysis and Integration of relevant theories and examples to support arguments (4 mark)	(10)

SET 1
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EM 03
Course Name: Brand Management

Max. Marks: 60		Duration: 3 Hours
PART A		
Answer all questions, each carries 2 marks.		Mark

			s
1		Define the term "Brand."	(2)
2		Discuss the importance of branding in the business context.	(2)
3		Explain the criteria for choosing brand elements.	(2)
4		Differentiate between Related extension and Unrelated extension in brand extension decisions.	(2)
5		Define "Brand Positioning." Briefly discuss the Points of Parity and Points of Difference in brand positioning.	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Discuss the concept of "Brand Loyalty" and its significance in brand management.	(4)
7		Analyse the advantages and disadvantages of Family vs Individual brand names.	(4)
8		Explain the guidelines for effective brand positioning. Provide examples to support your answer.	(4)
9		Compare and contrast the Brand Asset Valuation (BAV) Model and the CBBE Model for evaluating brand equity.	(4)
10		Outline the steps involved in Reinforcing and Revitalizing a brand. Provide examples.	(4)
11		Critically evaluate the decision-making process for choosing a brand name. How does it impact brand perception?	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Discuss the role of Brand Associations in shaping brand identity. Provide examples.	(8)
13		Explain the concept of Multiple Branding. How does it impact the overall brand strategy?	(8)
14		Evaluate the effectiveness of Integrated Marketing Communication Programs in Brand Building.	(8)
15		Elaborate on the importance of Brand Equity measurement in strategic brand management.	(8)
16		Explore the cultural considerations in Branding for international markets.	(8)

PART D (Compulsory Question, 10 marks)

17		"EcoBlend," a leading brand in the organic food industry, has been facing challenges in recent years. Despite its initial success as a pioneer in sustainable and eco-friendly food products, the brand is now struggling to maintain its market share. Consumer preferences are evolving, and competitors are entering the market with innovative offerings. As a result, EcoBlend's sales have declined, and there is a need for a strategic revival.	(10)

Current Situation:

1. EcoBlend's market share has dropped by 15% over the past two years.

2. Consumer surveys indicate a perception gap between the brand's eco-friendly values and its current product line.

3. Competitors are gaining traction with more diverse and modern organic offerings.

4. The brand's communication strategy appears outdated and fails to connect with the target audience.

a. Propose a repositioning strategy for EcoBlend. How can the brand realign its image to resonate with the changing preferences of the target audience?

b. Suggest specific changes to the brand's messaging and positioning.

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EM 03

Course Name: Brand Management			
Max. Marks: 60			Duration: 3 Hours

PART A		
	Answer all questions, each carries 2 marks.	Mark s
1	• Definition of a brand: 1 mark • Clarification of the role in identifying products/services: 1 mark	(2)
2	• Recognition of branding's impact on consumer trust: 1 mark • Understanding how branding distinguishes a product: 1 mark	(2)
3	• Identification of key criteria (memorability, meaningfulness, likability, adaptability, protectability): 1 mark • Explanation of the relevance of adaptability and protectability: 1 mark	(2)
4	• Clear distinction between related and unrelated extensions: 2 marks	(2)
5	• Clear definition of brand positioning: 1 mark • Accurate discussion of Points of Parity and Points of Difference: 1 mark	(2)

PART B		
Answer any FOUR questions from this section. Each question carries 4 marks.		
6	• Definition of brand loyalty: 1 mark • Explanation of its significance in brand management: 1 mark • Insightful discussion on its impact on repeat purchases and word-of-mouth: 2 marks	(4)
7	• Identification of advantages (consistent image, potential cost savings): 1 mark • Identification of disadvantages (lack of flexibility, potential damage to the overall brand): 1 mark • Balanced analysis covering both family and individual brand names: 2 marks	(4)
8	• Clear explanation of guidelines (relevance, consistency, distinctiveness): 2 marks • Relevant examples supporting each guideline: 2 marks	(4)
9	• Identification of key components of both models: 1 mark • Clear comparison highlighting similarities and differences: 2 marks • Recognition of how each model contributes to evaluating brand equity: 1 mark	(4)
10	• Identification of steps (brand audit, reassessing target audience): 1 mark	(4)

		• Clear examples for supporting each step: 3 marks	
1 1		• Identification of key steps in the decision-making process for choosing a brand name. -1 Marks • Recognition and discussion of the importance of factors such as uniqueness, memorability, cultural relevance, and legal considerations in the decision-making process. -2 Marks • Clear articulation of how the chosen brand name can influence consumer perception. -1 Marks	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

1 2		• Recognition of brand associations as mental links: 1 mark • Explanation of how positive brand associations contribute to a strong brand identity: 2 marks • Relevant examples supporting the discussion: 5 marks	(8)
1 3		• Definition and explanation of multiple branding concept: 2 marks • Understanding of the impact on overall brand strategy: 4 marks • Clear examples illustrating multiple branding strategies: 2 marks	(8)
1 4		• Identification of components of integrated marketing communication (IMC): 1 mark • Evaluation of how IMC contributes to building a strong brand: 4 marks • Examples illustrating successful IMC programs and their impact: 3 marks	(8)
1 5		• Recognition of brand equity as a valuable asset: 1 mark • Explanation of how measuring brand equity informs strategic decisions: 5 marks • Examples of brand equity measurement tools and their applications: 2 marks	(8)
1 6		• Identification of cultural factors affecting branding in international markets: 2 marks • Discussion of how cultural considerations influence brand perception: 4 marks • Examples illustrating successful or unsuccessful branding strategies in diverse cultural contexts: 2 marks	(8)

PART D (Compulsory Question)

1 7		**a. Repositioning Strategy for EcoBlend - 5 Marks**	(10)

a. Repositioning Strategy for EcoBlend - 5 Marks

- Identification of the need for repositioning based on the current challenges: 1 mark
- Clear proposal for how the brand should realign its image: 2 marks
- Consideration of changing preferences of the target audience: 1 mark
- Specific changes to messaging and positioning: 1 mark

b. Changes to Brand Messaging and Positioning for EcoBlend - 5 Marks

- Clear and justified changes to EcoBlend's messaging: 2 marks
- Specific adjustments to the brand's positioning: 2 marks
- Consideration of how the changes align with current market trends and preferences: 1 mark

SET 1

UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3E B04
Course Name: MARKETING ANALYTICS

Max. Marks: 60	Duration: 3 Hours

PART A

	Answer all questions, each carries 2 marks.	Marks
1	Explain the significance of marketing analytics in today's digital age.	(2)
2	What are some key performance indicators (KPIs) used in marketing analytics? Provide examples of KPIs for customer acquisition and retention.	(2)
3	Describe the process of data exploration in marketing analytics.	(2)
4	Define Customer Lifetime Value (CLV) and discuss its importance in marketing analytics.	(2)
5	Why is it essential for marketers to consider ethics and privacy concerns in marketing analytics?	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.		
6	Discuss the role of data visualization techniques in marketing analytics. Provide examples of visualization methods used for marketing data.	(4)
7	Explain the concept of customer segmentation and its relevance in marketing analytics.	(4)
8	How can CLV be used for customer segmentation? Provide a practical example.	(4)
9	Describe the process of optimizing marketing mix strategies using data analytics.	(4)
10	Outline the differences between customer acquisition and retention strategies. Provide examples of each.	(4)
11	What are recommendation systems, and how can they be implemented in marketing analytics?	(4)

	PART C	
	Answer any THREE questions from this section. Each question carries 8 marks	
12	Illustrate the steps involved in the marketing analytics process, from data collection to ROI calculations.	(8)
13	Explain how time series analysis can be used for trend prediction in marketing analytics. Provide a real-world scenario.	(8)
14	How does customer journey mapping contribute to understanding customer behavior? Provide a detailed explanation.	(8)
15	Discuss the ethical considerations that marketers should take into account when utilizing personalization techniques in marketing analytics.	(8)
16	Evaluate the impact of marketing analytics on marketing strategy and decision-making processes. Provide examples to support your answer.	(8)
	PART D (Compulsory Question)	
17	A company wants to improve its customer retention rates using marketing analytics. Develop a comprehensive strategy outlining the steps the company should take, including data collection, analysis, and implementation of retention strategies. Discuss potential challenges and how they can be addressed.	(10)

	SET 1	
	Scheme of Valuation / Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)	
	UNIVERSITY OF CALICUT ....SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR	
	Course Code: BUS 3E B04	
	Course Name: MARKETING ANALYTICS	
Max. Marks: 60		Duration: 3 Hours

	PART A	
	Answer all questions, each carries 2 marks.	Mark s
1	- 1 Mark for explaining the importance of marketing analytics in the digital age. - 1 Mark for stating how it helps businesses make informed decisions.	(2)
2	- 1 Mark for the identifying relevant KPIs for customer acquisition and retention. - 1 Mark for examples provided are appropriate and demonstrate understanding.	(2)
3	- 1 Mark for clear description of the steps involved in data exploration. - 1 Mark for understanding of its importance in uncovering insights.	(2)
4	- 1 Mark for accurate definition of CLV and its significance in marketing analytics. - 1 Mark for the explanation of how it helps in understanding customer value.	(2)
5	- 1 Mark for stating the importance of ethics and privacy in marketing analytics. - 1 mark for understanding of potential risks and implications.	(2)
	PART B	
	Answer any FOUR questions from this section. Each question carries 4 marks.	
6	- 2 Marks for explaining how data visualization aids in understanding complex data. - 2 Marks for examples provided are relevant and demonstrate understanding.	(4)
7	- 2 Marks for clear explanation of customer segmentation and its relevance. - 2 Marks for explaining different segmentation methods.	(4)
8	- 2 marks for explaining how CLV can be used for segmentation. - 2 marks for giving suitable examples.	(4)
9	- 2 Marks for description of the process of optimizing marketing mix strategies. - 2 Marks for explaining how data analytics can inform decision-making.	(4)
1	- 2 Marks for clearly explaining the differences between acquisition and retention	(4)

0	strategies. - 2 marks for providing relevant examples.	
1 1	- 2 Marks for suggesting recommendation systems in marketing analytics. - 2 Marks for explanting the implementation methods.	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

1 2	- 2 Marks for mentioning various sources of data collection such as customer surveys, website analytics, social media data, etc. - 2 Marks for discussing techniques to clean and pre-process data like removing duplicates, handling missing values, etc. - 2 Marks for explaining techniques like segmentation, regression analysis, clustering, etc., used for analyzing data. - 2 Marks for explaining how ROI is calculated in the context of marketing analytics.	(8)
1 3	- 2 Marks for defining time series analysis and its relevance in trend prediction. - 4 Marks for explaining how time series analysis techniques like moving averages, exponential smoothing, ARIMA, etc., can be applied to predict trends in marketing data. - 2 Marks for providing a relevant example illustrating the application of time series analysis in marketing, with clear explanation.	(8)
1 4	- 2 Marks for defining customer journey mapping and its importance in understanding customer behavior. - 4 Marks for explaining how customer journey mapping helps in identifying touchpoints, pain points, and motivations of customers throughout their journey. - 2 Marks for providing a thorough explanation with examples or illustrations.	(8)
1 5	- 2 Marks for listing ethical considerations such as privacy concerns, data security, transparency, consent, etc. - 4 Marks for discussing the potential impact of personalization techniques on individuals and society, both positive and negative. - 2 Marks for suggesting strategies or guidelines for marketers to ensure ethical use of personalization techniques.	(8)
1 6	- 4 Marks for analyzing how marketing analytics influences strategy formulation, targeting, positioning, product development, etc. - 4 Marks for providing specific examples or case studies demonstrating the impact of marketing analytics on decision-making processes.	(8)

PART D (Compulsory Question, 10 marks)

1 7	- 4 Marks for outlining a comprehensive strategy including data collection methods, analysis techniques, and retention strategies. - 3 Marks for identifying potential challenges such as data quality issues, integration of disparate data sources, privacy concerns, etc. - 3 Marks for providing solutions or mitigation strategies for the identified	(10)

		challenges.	

Semester	Course Code	Course Title	Total Credits	Type - Elective

SET 1

UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EM 05

Course Name: Digital Marketing

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		What is Digital marketing?	(2)
2		Define Social Media Marketing.	(2)
3		Discuss the role of artificial intelligence (AI) in digital marketing	(2)
4		Discuss the key features of an effective email marketing campaign.	(2)
5		What is keyword research, and why is it important for SEO?	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Differentiate between organic search results and paid search results. Provide examples of each.	(4)
7		Discuss the importance of keyword research in PPC advertising.	(4)
8		How can businesses effectively market on Instagram?	(4)
9		Discuss the privacy concerns related to digital marketing	(4)
10		Elaborate on the key considerations when creating effective content for social media platforms.	(4)
11		Summarize the key steps a business can take to improve its search engine presence through on-site and off-site activities.	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		Explain the importance of mobile SEO. How can websites optimize for mobile devices to enhance search rankings?	(8)
13		Elaborate on the customer journey in digital marketing. How does the marketing funnel apply to online consumer behavior?.	(8)

1 4		How are voice search and smart devices influencing digital marketing practices? Provide insights into optimizing content for voice search.	(8)
1 5		Summarize the key elements of a successful digital marketing strategy that incorporates social media. How can businesses align their goals with their chosen platforms?	(8)
1 6		Provide an overview of Google AdWords. How can businesses use AdWords to enhance their online visibility?	(8)
		PART D (Compulsory Question, 10 marks)	
1 7		Case study - XYZ Fitness, a fitness app startup, aims to launch its mobile application to help users track their fitness routines, receive personalized workout plans, and connect with fitness experts. The goal is to acquire a significant user base and establish a strong brand presence in the competitive fitness app market. - Describe the key strategies used to achieve the target of 100,000 app downloads within the first three months. - Analyze the overall results of the XYZ Fitness app launch campaign. What were the most significant achievements and challenges faced? - Based on the campaign's outcomes, what recommendations would you provide for future digital marketing initiatives for XYZ Fitness or similar apps?	(10)

SET 1

Scheme of Valuation/Answer Key
(Scheme of evaluation (marks in brackets) and answers of problems/key)

UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EM 05

Course Name: DIGITAL MARKETING

Max. Marks: 60			Duration: 3 Hours

PART A		
Answer all questions, each carries 2 marks.		Marks
1	Digital marketing refers to the use of digital channels, platforms, and technologies to promote and advertise products, services, or brands to a target audience.	(2)
2	Social Media Marketing (SMM) is a digital marketing strategy that involves using social media platforms to connect with an audience, build brand awareness, drive website traffic, and promote products or services.	(2)
3	Artificial Intelligence (AI) plays a transformative role in shaping the landscape of digital marketing. Its integration brings efficiency, personalization, and data-driven decision-making to various aspects of marketing strategies.	(2)
4	An effective email marketing campaign involves careful planning, targeted communication, and a focus on delivering value to the audience. Clear and Compelling Subject Lines, Personalized emails, The content of the email should provide value, information, or entertainment to the recipient.	(2)
5	Keyword research is a critical process in Search Engine Optimization (SEO) that involves identifying and analyzing the terms or phrases users type into search engines when looking for information, products, or services.	(2)
PART B		
Answer any FOUR questions from this section. Each question carries 4 marks.		
6	Organic search results and paid search results are two distinct types of listings that appear on search engine results pages (SERPs). Explanations with examples – 4 marks	(4)
7	The importance of keyword research in PPC advertising can be summarized as follows: Targeted Audience Reach, Cost Control, Ad Relevance, Quality Score	(4)

		Improvement, Ad Positioning, Negative Keyword Identification, Ad Copy Optimization, Long-Term Strategy.	
		Any 4 points – 4 marks	
8		Marketing on Instagram can be highly effective for businesses, given its visual nature and large user base. Here are some strategies for businesses to effectively market on Instagram:	(4)
		Create a Business Profile:	
		Optimize Profile Bio:	
		High-Quality Visual Content:	
		Consistent Branding:	
		Engaging Captions:	
		Use Hashtags Strategically:	
		Instagram Stories and Reels:	
		Any 4 points – 4 marks	
9		Privacy concerns in digital marketing have become increasingly prominent due to the vast amount of personal data collected, stored, and utilized by businesses for targeted advertising and analytics. Here are some key privacy concerns related to digital marketing:	(4)
		Data Collection and Tracking:	
		Targeted Advertising:	
		User Profiling:	
		Third-Party Sharing:	
		Consent and Transparency:	
		Data Security:	
		Ad Blockers and Privacy Tools:	
		Regulatory Compliance:	
		Children's Privacy:	
		Location Tracking:	
		Algorithmic Bias:	
		Any 4 points – 4 marks	
10		Creating effective content for social media platforms involves a strategic approach to engage and connect with your target audience. Here are key considerations to keep in mind:	(4)
		Understand Your Audience:. Set Clear Objectives: Choose the Right Platforms:	
		Consistent Branding: Create Compelling Visuals: Storytelling: Educational Content: Use Hashtags Wisely: Engage Your Audience: Timing and Frequency:	

		Mobile Optimization: Call-to-Action (CTA): Monitor Analytics: Stay Trendy and Relevant: User-Generated Content (UGC):	
		Any 4 points – 4 marks	
1 1		Improving a business's search engine presence involves a combination of on-site and off-site activities. Here's a summarized list of key steps:	(4)
		On-Site Activities:	
		Keyword Research: Optimize Website Structure: Mobile Optimization:	
		Quality Content Creation: Page Loading Speed: Internal Linking: Title Tags and Meta Descriptions: User Experience (UX):	
		Off-Site Activities:	
		Backlink Building: Social Media Presence: Online Reviews and Reputation Management: Local SEO Optimization: Guest Blogging: Influencer Collaborations: Monitor and Analyze Performance: Technical SEO:	
		Any 4 points – 4 marks	
	PART C		
	Answer any THREE questions from this section. Each question carries 8 marks		
1 2		Mobile SEO, or mobile search engine optimization, is crucial in today's digital landscape due to the increasing use of mobile devices for internet browsing. With a significant portion of users accessing websites on smartphones and tablets, optimizing for mobile is essential for delivering a positive user experience and maintaining or improving search rankings. Here's why mobile SEO is important and how websites can optimize for mobile devices:	(8)
		Importance of Mobile SEO: - 4 marks	
		User Behavior: Google's Mobile-First Indexing: User Experience (UX): Local Search and Micro-Moments: Faster Page Loading: Competitive Advantage:	
		Tips for Mobile Optimization: - 4 marks	
		Responsive Design: Mobile-Friendly Content: Optimize Images and Multimedia:	
		Mobile-Friendly Navigation: Accelerated Mobile Pages (AMP): Optimize Page Speed: Local SEO Optimization: Test Mobile-Friendliness: Prioritize Core Web Vitals:	
1 3		Proper explanation to both questions. Each question carries 4 marks.	(8)
1 4		Proper explanation to both questions. Each question carries 4 marks	(8)
1 5		Key Elements of a Successful Digital Marketing Strategy with Social Media:	(8)
		Clear Objectives: Target Audience Identification: Platform Selection: Content Strategy: Consistent Branding: Engagement and Interaction: Paid Advertising: Influencer Collaboration: Analytics and Data Analysis: Social	

		Media Calendar: Community Building: Cross-Platform Integration: Customer Feedback and Surveys: Monitoring Competitors: Aligning Business Goals with Chosen Platforms: Understand Platform Demographics: Match Content to Platform Capabilities: Platform-Specific Goals: Adapt Strategy to Platform Culture: Budget Allocation: Evaluate Performance Metrics: Test and Iterate: Stay Informed about Platform Updates: Social media platforms often introduce new features and updates. Stay informed about these changes and leverage new opportunities to enhance your strategy.	
		Any 7 points – 8 marks	
1 6		Google AdWords, now known as Google Ads, is an online advertising platform developed by Google. It allows businesses to create and display ads within the Google search engine results and on Google's advertising network, which includes various websites and platforms. Google Ads operates on a pay-per-click (PPC) model, where advertisers pay only when users click on their ads.	(8)
		Overview of Google Ads:	
		Ad Formats: Keyword Targeting: Bid System: Ad Rank: Ad Extensions: Targeting Options: Campaign Types: Conversion Tracking: Budget Control:	
		How Businesses Can Use Google Ads to Enhance Online Visibility:	
		Increase Website Traffic: Generate Leads: Boost Sales: Promote Brand Awareness: Target Specific Locations: Maximize Mobile Presence: Adapt Strategies with Analytics: Experiment with Ad Variations: Utilize Remarketing: Continuous Monitoring and Optimization:	
		Explanation with points – 8 marks	
	PART D (Compulsory Question)		
1 7		1. **Key Strategies to Achieve 100,000 App Downloads: - 3 marks** Influencer Collaborations: Social Media Campaigns: App Store Optimization (ASO): Personalized Content Marketing: Strategic Partnerships: Referral and Loyalty Programs: Email Marketing Campaigns: Localized Marketing: Privacy and security are crucial. 2. **Analysis of Results:** - **3 marks** Achievements: Exceeded Download Target: Positive User Feedback: High Engagement Rates: **Challenges:** Intense Competition: Technical Glitches: 3. **Recommendations for Future Digital Marketing Initiatives: - 4 marks**	(10)

		Continuous User Engagement: Data-Driven Insights: Iterative App Updates: Community Building: Localized Expansion: Refine Influencer Partnerships: Address Technical Issues Proactively: Strategic User Surveys:	

SET 1
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 4 EM 01
Course Name: Integrated Marketing Communication

Max. Marks: 60		Duration: 3 Hours

PART A		
Answer all questions, each carries 2 marks.		Marks
1	Define Integrated Marketing Communications	(2)
2	Discuss the key components of the IMC mix	(2)
3	Define advertising	(2)
4	Define the concept of touch points in IMC	(2)
5	Explain the concept of synergy in IMC	(2)

PART B		
Answer any FOUR questions from this section. Each question carries 4 marks.		
6	Define advertising and explain its role in the context of Integrated Marketing Communications (IMC).	(4)
7	Discuss the AIDA model (Attention, Interest, Desire, Action) in advertising	(4)
8	Explain the concept of media planning in advertising	(4)
9	Explain the Role of Public Relations in IMC.	(4)
10	Define corporate reputation and explain its significance in the business context	(4)
11	Discuss the challenges and opportunities of integrating online and offline advertising	(4)

PART C		
Answer any THREE questions from this section. Each question carries 8 marks		
12	Examine the role of storytelling in advertising. How can storytelling enhance the effectiveness of an advertisement in conveying the brand message?	(8)
13	Compare and contrast traditional advertising media (e.g., TV, radio, print) with digital advertising channels. Discuss the advantages and limitations of each in the context of an IMC strategy.	(8)
14	Discuss the concept of brand consistency in IMC. How can companies ensure a consistent message across various communication channels? Provide examples.	(8)

1 5		Explore the impact of artificial intelligence and data analytics on IMC. How can these technologies be leveraged to enhance personalized communication with the target audience?	(8)
1 6		What are the key metrics used to measure the effectiveness of an IMC campaign? Provide examples of both quantitative and qualitative measures.	(8)
PART D (Compulsory Question, 10 marks)			
1 7		Analyse a recent IMC campaign of a well-known brand. Evaluate its effectiveness, highlighting the integration of various communication channels and the alignment with the brand message.	(10)

SET 1			
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)			
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR			
Course Code: BUS 4 EM 01			
Course Name: Integrated Marketing Communication			
Max. Marks: 60			Duration: 3 Hours
PART A			
Answer all questions, each carries 2 marks.			Marks
1		Explanation – 2 marks	(2)
2		Explanation – 2 marks	(2)
3		Explanation – 2 marks	(2)
4		Explanation – 2 marks	(2)
5		Explanation – 2 marks.	(2)
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		Definition – 2 marks; Explanation of role – 2 marks	(4)
7		1.Attention Objective is to attract the attention of the target audience. 2. Interest: Objective is to sustain the audience's interest and curiosity. 3. Desire: Objective is to stimulate a desire or need for the product or service. 4.Action: Objective is to prompt the audience to take a specific action. All four points mentioned and explained – 4 marks	(4)
8		Key components of the concept of media planning	(4)

		Understanding the Target Audience, Setting Objectives, Media Selection, Budget Allocation, Media Buying, Timing and Scheduling, Monitoring and Evaluation, Adapting to Market Changes. Any four points – 4 marks	
9		Building and Maintaining Relationships; Enhancing Credibility and Trust; Managing Reputation; Crisis Management; Media Relations; Content Creation; Aligning Messages Across Channels; Community Engagement Any four points – 4 marks	(4)
10		Significance of Corporate Reputation in the Business Context: Consumer Trust and Loyalty; Brand Differentiation; Employee Recruitment and Retention; Investor Confidence; Crisis Resilience; Customer Advocacy; Regulatory and Stakeholder Relations; Market Value and Competitiveness; Long-Term Sustainability; Customer Perceptions of Quality Any four points – 4 marks	(4)
11		Discussion on challenges – 4 marks Opportunities – 4 marks	(4)
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		Role of Storytelling in Advertising – 4 marks How Storytelling Enhances Advertisement Effectiveness- 4 marks	(8)
13		Comparison and contrast – Any 4 points – 4 marks Advantages and limitations – Any 2 points under each – 4 marks	(8)
14		**Key Elements of Brand Consistency:** Visual Identity: Messaging and Tone: Values and Mission: Customer Experience: Any four points – 4 marks	(8)
15		Artificial Intelligence and data analytics revolutionize Integrated Marketing Communications (IMC) by enhancing personalized targeting, real-time insights, and predictive analytics, optimizing strategies and communication channels for unparalleled effectiveness and efficiency. – 4 marks AI and data analytics enable precise audience segmentation, allowing tailored content delivery based on individual preferences, behavior, and demographics, ensuring personalized communication that resonates effectively. – 4 marks	(8)
16		Key metrics for IMC campaign effectiveness include ROI, brand awareness, engagement rates, conversion rates, and customer retention, reflecting overall impact and success. – 4 marks Examples of qualitative measures – 2 marks	(8)

		Examples of quantitative measures – 2 marks	
		PART D (Compulsory Question)	
1 7		Executive Summary; Case Introduction – 2 marks Defining a problem; Situational Analysis of the product – 2 marks Analyse a recent IMC campaign – 2 marks Evaluate its effectiveness, highlighting the integration of various communication channels – 2 marks Suggest alternatives & Conclusion – 2 marks	(10)

SET 1

UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION,MONTH, YEAR

Course Code: BUS 4EM 02

Course Name: Services Marketing

Max. Marks: 60		Duration: 3 Hours

PART A		
	Answer all questions, each carries 2 marks.	Mark s
1	Explain the concept of perishability in services	(2)
2	What do you understand by sustainable service delivery?	(2)
3	Provide two examples for service co-branding	(2)
4	Write a short note on pricing strategies for services	(2)
5	What is TQM in services?	(2)

PART B		
Answer any FOUR questions from this section. Each question carries 4 marks.		
6	Explain the concept of service recovery. Why it is crucial in managing customer complaints and dissatisfaction.	(4)
7	What role does service quality play in service marketing? How can it be measured and improved?	(4)
8	Suggest marketing strategies for a reputed foreign University from UK to enter in Kerala, in the field of management education	(4)
9	How do service firms identify and leverage their unique value propositions to establish a strong market position amidst competitors?	(4)
1 0	Write a note on employees role in service delivery	(4)
1 1	Discuss the unique challenges and opportunities associated with marketing intangible services compared to tangible products	(4)

PART C		
Answer any THREE questions from this section. Each question carries 8 marks		
1 2	Explain gap analysis in the context of service quality	(8)
1 3	Discuss the role of technology and digital platforms in modern service marketing strategies	(8)
1 4	Explain the concept of CRM in service marketing. How can businesses build and maintain strong customer relationships to drive loyalty and retention?	(8)

1 5		How do you ensure that your marketing efforts align with the unique cultural and ethical considerations of the tourism destinations you promote?	(8)
1 6		Explain the concept of the services marketing mix (7Ps) and provide examples for each element.	(8)
PART D (Compulsory Question, 10 marks)			
1 7		Carewell Hospital is a leading healthcare facility in Kerala, known for its comprehensive medical services and compassionate patient care. Located in a suburban area, Carewell Hospital caters to a diverse patient population and strives to maintain its reputation as a trusted healthcare provider. However, the hospital has identified several challenges in its services marketing efforts. a) What do you think are the major challenges that Carewell hospital faces? b) What strategies would you suggest to overcome those challenges?	(10)

SET 1			
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)			
UNIVERSITY OF CALICUT ……. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR			
Course Code: BUS 4EM 02			
Course Name: Data Analytics and Computing			
Max. Marks: 60			Duration: 3 Hours
PART A			
		Answer all questions, each carries 2 marks.	Marks
1		Services are consumed at the moment they are delivered. Eg. Transportation, Hospitality etc. – 2 marks	(2)
2		It seeks to deliver those services in a way that balances and optimizes three key areas: 1. Economic well-being: 2. Social well-being: 3. Environmental well-being. – 2 marks	(2)
3		Any two mentioned – 2 marks	(2)
4		Cost-based Pricing: Value-based Pricing: Competitive Pricing: Skimming Pricing: Penetration Pricing: Bundle Pricing Freemium Pricing: Any two explained – 2 marks	(2)
5		Total Quality Management, in services refers to a management philosophy and approach that focuses on continuous improvement of quality and customer satisfaction across all aspects of service delivery. – 2 marks	(2)
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		Service recovery involves addressing and resolving customer complaints or service failures to restore satisfaction and loyalty, enhancing overall customer experience. – 2 marks Service recovery is crucial for managing complaints as it not only resolves issues but also restores customer trust, loyalty, and satisfaction, preventing negative impacts on brand reputation. – 2 marks	(4)
7		Service quality is paramount in service marketing, shaping customer perceptions and satisfaction. It establishes trust, builds brand reputation, and influences customer loyalty and retention. – 2 marks Service quality is measured through customer feedback, surveys, and employee assessments. – 2 marks	(4)
8		Entering a new market like Kerala for a foreign university from UK in the field of management education requires a comprehensive marketing strategy tailored to the local context. The UK university	(4)

		can effectively penetrate the Kerala market and establish a strong presence in the field of management education, by implementing the following suggestions.	
		Understand the Local Market	
		Establish Local Partnerships	
		Localized Marketing Materials	
		Digital Marketing Campaigns	
		Engage with Influencers	
		Organize Information Sessions and Workshops	
		Scholarships and Financial Aid	
		Good infrastructure and Faculty	
		Participate in Education Fairs and Events	
		Alumni Engagement	
		Continuous Evaluation and Adaptation	
		Any reasonable explanations in these lines with minimum 4 points 4 marks	
9		The steps typically involved: • Market Analysis: • Identifying Unique Strengths and Capabilities: • Developing a Unique Value Proposition: • Differentiation Strategy: • Effective Communication and Branding: • Continuous Improvement and Innovation: • Building Customer Relationships Any 4 points – 4 marks	(4)
10		Employees serve as the face, voice, and embodiment of the brand. Their role extends far beyond merely executing tasks; they are the primary drivers of customer satisfaction, loyalty, and brand reputation. In conclusion, employees are the cornerstone of successful service delivery, embodying the organization's values, culture, and commitment to customer satisfaction. Explanation – 4 marks	(4)
11		Challenges: - 2 marks Intangibility, Perishability, Inseparability, Heterogeneity, Customer Perceptions and Expectations: Opportunities: - 2 marks Customization and Personalization, Relationship Building, Value-added Services, Service Innovation, Brand Building and Reputation Management:	(4)
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		It refers to the process of identifying and analyzing the gaps or discrepancies between customer expectations and the actual service provided by an organization Gap 1: Knowledge Gap: Gap 2: Policy Gap: Gap 3: Delivery Gap: Gap 4: Communication Gap: Gap 5: Perception Gap:	(8)

		Any 4 gaps explained – 8 marks	
1 3		• Technology and digital platforms play a significant role in modern • .	(8)
1 4		Any 7 points explained – 8 marks	(8)
1 5		Ensuring that marketing efforts align with the unique cultural and ethical considerations of the tourism destinations being promoted is crucial for responsible and sustainable tourism practices. By prioritizing cultural sensitivity, ethical engagement, and sustainable practices in marketing efforts, destinations can foster positive relationships with local communities, preserve cultural heritage, and promote responsible tourism that benefits both visitors and residents alike. Explanation – 8 marks	(8)
1 6		The services marketing mix, often referred to as the 7Ps, is a framework used by service-based businesses to design and implement effective marketing strategies. The 7Ps include Product, Price, Place, Promotion, People, Process, and Physical Evidence. 7Ps with explanation – 8 marks	(8)
		PART D (Compulsory Question)	
1 7		a) Challenges: - 5 marks Patient Experience: including long wait times, limited communication between staff and patients, and concerns regarding the overall ambiance and comfort of the facility. Competition: With the emergence of new healthcare facilities in the region, Hospital faces increased competition, requiring innovative strategies to retain existing patients and attract new ones. Brand Perception: seeks to enhance its brand perception and differentiate itself as a provider of exceptional patient-centered care. b) Strategies Implemented: - 5 marks Patient-Centric Approach: focusing on improving the overall patient experience from admission to discharge. This included streamlining administrative processes, reducing wait times, and enhancing communication channels between staff and patients. Service Quality Improvement: involves regular monitoring of clinical outcomes, adherence to best practices, and continuous staff training and development. Facility Upgrades: This include improvements in patient rooms, waiting areas, and amenities such as cafeterias and parking facilities. Community Engagement: The hospital engaged with the local community through health education programs, wellness workshops, and outreach initiatives aimed at raising awareness about preventive healthcare and disease management. Digital Marketing: leverage digital marketing channels, including social	(10)

	media platforms, online advertising, and search engine optimization, to enhance its online presence and reach a wider audience of potential patients.	

UNIVERSITY OF CALICUT

............SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EM 03

Course Name: International Marketing

Max. Marks: 60	Duration: 3 Hours

PART A

	Answer all questions, each carries 2 marks.	Marks
1	Explain the impact of globalization on marketing.	(2)
2	Discuss the factors influencing consumer behavior in global markets.	(2)
3	What are the key components of the global marketing mix?	(2)
4	Describe the different modes of entry into international markets.	(2)
5	Highlight the ethical issues associated with international marketing.	(2)

PART B

	Answer any FOUR questions from this section. Each question carries 4 marks.	
6	How does international marketing planning differ from domestic marketing planning?	(4)
7	Explain the concept of consumer segmentation in the context of global markets.	(4)
8	Discuss the importance of pricing strategies in global markets.	(4)
9	Compare and contrast the various international distribution channels.	(4)
10	What are the advantages and disadvantages of different international market entry strategies?	(4)
1	How do emerging trends in international marketing influence strategic decision-	(4)

1	making?	

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12	Analyze the opportunities and threats faced by Indian companies in the international market.	(8)
13	Evaluate the impact of political and economic factors on global marketing strategies.	(8)
14	Discuss the role of promotion and advertising strategies in international marketing.	(8)
15	Critically analyze the challenges associated with managing global market entry and expansion.	(8)
16	How can sustainable and green marketing practices be integrated into global marketing strategies?	(8)

PART D

Compulsory Question. Question carries 10 marks

CASE STUDY

| 17 | Procter and Gamble (P&G), renowned for its marketing prowess, operates globally with over 200 products sold in 130 countries. Initially, P&G's strategy involved developing products and marketing strategies in the US and then replicating them globally. However, this approach faced challenges in Japan in the 1970s and 1980s. For instance, P&G's bulky diapers and laundry detergent Cheer, developed in the US, failed to resonate with Japanese consumers due to cultural and usage differences. This prompted P&G to adapt its products and marketing strategies to local preferences.

Learning from these experiences, P&G shifted towards a more decentralized approach, empowering subsidiaries in Japan and Europe to handle product development and marketing. This shift towards local responsiveness proved successful, as seen with the introduction of JOY dish soap in Japan. Through market research, P&G identified unmet consumer needs and developed a highly concentrated formula effective against grease, tailored to Japanese eating habits. Moreover, P&G innovated in packaging, introducing compact cylinders that optimized shelf space and enhanced distribution efficiency.

P&G's advertising strategy for JOY was equally impactful, with humorous commercials showcasing the product's efficacy in removing grease. The launch of JOY in 1996 saw immediate success, quickly capturing a significant market share. Strong consumer demand allowed P&G to increase prices, while retailers benefited from higher margins, cementing JOY's position in the market. Overall, P&G's journey with products like diapers, laundry detergent, and dish soap in Japan underscores the importance of adapting to local preferences and market conditions. By decentralizing decision-making and focusing on understanding | (10) |
|---|---|---|

consumer needs, P&G achieved success in a highly competitive market, highlighting the significance of flexibility and innovation in international business strategies.

QUESTIONS

1. How did Procter and Gamble's initial global expansion strategy evolve in response to challenges faced in the Japanese market during the 1970s and 1980s? What were the key factors driving this shift in approach?

2. What were the critical elements of Procter and Gamble's successful launch of JOY dish soap in Japan? How did P&G leverage market insights, product innovation, packaging design, and advertising strategy to achieve significant market penetration and consumer acceptance?

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 4EM 03
Course Name: International Marketing

Max. Marks: 60	Duration: 3 Hours

PART A	
Answer all questions, each carries 2 marks.	Marks
1	- 1 Mark for explaining how globalization has expanded markets and increased competition. - 1 Mark for discussing how globalization has led to standardization or adaptation of marketing strategies.	(2)
2	- 1 Mark for identifying key factors such as cultural differences, economic factors, and social factors. - 1 Mark for explaining how these factors influence consumer behavior in global markets.	(2)
3	- 1 Mark for identifying the components (product, price, place, promotion).	(2)

	- 1 Mark for explaining how each component may need to be adapted for global markets.	
4	- 1 Mark for listing different modes of entry (exporting, licensing, joint ventures, etc). - 1 Mark for explaining the advantages and disadvantages of each mode.	(2)
5	- 1 Mark for identifying ethical issues such as cultural imperialism, environmental concerns, and deceptive advertising. - 1 Mark for discussing the implications and potential solutions for the ethical issues.	(2)
	PART B	
	Answer any FOUR questions from this section. Each question carries 4 marks.	
6	- 1 Mark for identifying the key differences between international and domestic marketing planning. - 3 Marks for providing detailed explanations or examples that illustrate these differences effectively.	(4)
7	- 1 Mark for defining consumer segmentation. - 1 Mark for explaining how consumer segmentation is applied in global markets. - 2 Marks for providing examples or case studies that demonstrate the concept effectively.	(4)
8	- 1 Mark for discussing the importance of pricing strategies in global markets. - 3 Marks for providing a comprehensive discussion that covers various aspects of pricing strategies, such as pricing for different market segments, pricing in different currencies, etc.	(4)
9	- 2 Marks for comparing international distribution channels. Provide examples that illustrate the comparison effectively. - 2 Marks for contrasting international distribution channels. Provide examples that illustrate the contrast effectively.	(4)
10	- 2 Marks for explaining the advantages of different international market entry strategies. Provide real-world examples to support the discussion. - 2 Marks for explaining the disadvantages of different international market entry strategies. Provide real-world examples to support the discussion.	(4)
11	- 1 Mark for discussing the influence of emerging trends on strategic decision-making. - 3 Marks for providing a detailed analysis of specific emerging trends and their impact on strategic decision-making in international marketing.	(4)
	PART C	
	Answer any THREE questions from this section. Each question carries 8 marks	
12	- 4 Marks for the identification and explanation of opportunities for Indian companies in the international market.	(8)

	- 4 Marks for the identification and explanation of threats faced by Indian companies in the international market	
1 3	- 4 Marks for the evaluation of political factors affecting global marketing strategies - 4 Marks for the evaluation of economic factors affecting global marketing strategies	(8)
1 4	- 4 Marks for discussing the role of promotion strategies in international marketing - 4 Marks for discussing the role of advertising strategies in international marketing	(8)
1 5	- 4 Marks for the critical analysis of challenges related to global market entry - 4 Marks for the critical analysis of challenges related to global market expansion	(8)
1 6	- 4 Marks for the explanation of sustainable marketing practices and their integration into global strategies. - 4 Marks for the explanation of green marketing practices and their integration into global strategies.	(8)
	PART D **(Compulsory Question, 10 marks)**	
1 7	**QUESTION 1** - 1 Mark for explaining P&G's initial global expansion strategy and its challenges in Japan - 2 Marks for the identification and discussion of the factors leading to the shift in approach - 1 Mark for the depth of analysis in explaining how P&G's approach evolved - 1 Mark for the use of relevant examples from the case study to support the response. **QUESTION 2** - 1 Mark for the identification and explanation of critical elements in the successful launch of JOY dish soap. - 1 Mark for the detailed discussion on how P&G utilized market insights for product innovation. - 1 Mark for the analysis of the role of packaging design in enhancing market penetration and distribution efficiency. - 1 Mark for the evaluation of the effectiveness of P&G's advertising strategy in achieving consumer acceptance. - 1 Mark for the coherence in integrating various elements and demonstrating their impact on market success.	(10)

SET 1

UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EM 04

Course Name: Sales & Distribution Management

Max. Marks: 60			Duration: 3 Hours

PART A			
	Answer all questions, each carries 2 marks.		Marks
1		Explain the relevance of KPI in sales?	(2)
2		Define solution-based selling approach?	(2)

3		What is a sales territory?	(2)
4		Explain retail strategies?	(2)
5		Define hybrid channel structure?	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Describe the process of developing sales objectives and strategies?	(4)
7		How do solution-based selling approaches differ from traditional selling methods.?	(4)
8		Explain the purpose of strategic sales audits?	(4)
9		Explain the process of designing a channel system?	(4)
10		Briefly explain the advantages and disadvantages of E- retailing	(4)
11		Briefly outline key recruitment and training strategies for building a successful sales team?	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Summarize the stages of the personal selling process and its significance in customer engagement?	(8)
13		Explain why building long-term partnerships is crucial in sales, and how relationship selling techniques contribute to this?	(8)
14		How do advanced forecasting methods and predictive analytics contribute to improved sales planning and decision-making?	(8)
15		What is channel conflict, explain the stages through which channel conflicts evolves?	(8)
16		Explain the role of inventory management in the overall distribution network?	(8)

PART D (Compulsory Question, 10 marks)

17		Case study A leading IT solutions provider sought to enhance its market position by identifying and managing key accounts strategically. Through data analysis, they identified major players in the finance and healthcare sectors as key accounts due to their significant IT needs. The sales team was tasked with personalized outreach to establish long-term relationships and provide tailored solutions A. What kind of a sales approach would be ideal for the company to adopt and justify? B. How the company can ensure the best performance from the sales team?	(10)

SET 1	
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)	
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR	
Course Code: BUS 4EM 04	
Course Name: Sales & Distribution Management	

Max. Marks: 60			Duration: 3 Hours
PART A			

		Answer all questions, each carries 2 marks.	Marks
1		Explanation – 2 marks	(2)
2		Explanation – 2 marks	(2)

3		Explanation – 2 marks	(2)
4		Explanation – 2 marks	(2)
5		Explanation – 2 marks	(2)

<table>
<tr><td colspan="4" align="center">PART B</td></tr>
<tr><td colspan="4" align="center"><i>Answer any FOUR questions from this section. Each question carries 4 marks.</i></td></tr>
<tr><td>6</td><td></td><td>Developing sales objectives involves setting measurable targets, while strategies entail aligning sales tactics with market dynamics, customer needs, and organizational goals for optimal performance.- 4 marks</td><td>(4)</td></tr>
<tr><td>7</td><td></td><td>Solution-based selling focuses on addressing customer needs with tailored solutions, emphasizing value. In contrast, traditional methods often prioritize product features and generic sales pitches. – Explanation 4 marks</td><td>(4)</td></tr>
<tr><td>8</td><td></td><td>A strategic sales audit is a comprehensive examination and assessment of a company's sales function, processes, and strategies. The purpose of conducting a strategic sales audit is to evaluate the effectiveness and efficiency of the sales activities within an organization. This process helps identify areas of strength, weaknesses, opportunities, and threats within the sales function. Explanation – 4 marks</td><td>(4)</td></tr>
<tr><td>9</td><td></td><td>The process includes various strategic decisions to ensure efficient and effective distribution.
Understand Customer Needs, Define Distribution Objectives Segment the Market, Evaluate Channel Alternatives, Channel Levels and Intermediaries, Select Channel Partners, Channel Functions and Responsibilities, Develop Distribution Policies, Technology Integration, Training and Support, Establish Performance Metrics: Feedback Mechanism. – Any four points – 4 marks</td><td>(4)</td></tr>
<tr><td>10</td><td></td><td>Advantages – any two points – 2 marks

Disadvantages – any two points – 2 marks</td><td>(4)</td></tr>
<tr><td>11</td><td></td><td>Recruit talent with industry knowledge. Implement targeted training on products, sales techniques, and effective communication for skill development and success. – 4 marks</td><td>(4)</td></tr>
<tr><td colspan="4" align="center">PART C</td></tr>
<tr><td colspan="4" align="center"><i>Answer any THREE questions from this section. Each question carries 8 marks</i></td></tr>
<tr><td>12</td><td></td><td>The personal selling process includes prospecting, approach, presentation, handling objections, closing, and follow-up, fostering meaningful customer relationships and satisfaction. – Explanation 8 marks</td><td>(8)</td></tr>
<tr><td>13</td><td></td><td>Building long-term partnerships enhances trust, loyalty, and customer retention, creating a foundation for sustainable business growth and success. – 4 marks

Relationship selling techniques prioritize understanding client needs, fostering trust, and delivering personalized solutions, nurturing enduring partnerships and customer loyalty.- 4 marks</td><td>(8)</td></tr>
</table>

1 4		Advanced forecasting and predictive analytics analyze data patterns, enhancing accurate sales predictions, informed decision-making, and proactive planning for optimal outcomes. – Explanation 8 marks	(8)
1 5		Channel conflict: Disagreements or disputes among distribution channel members regarding roles, responsibilities, and rewards, hindering collaborative efforts and efficiency. – 4 marks Evolution stages: - 4 marks Latent Conflict: Potential issues arise. Perceived Conflict: Issues recognized. Felt Conflict: Tension escalates. Manifest Conflict: Open disputes emerge. Conflict Aftermath: Resolutions or ongoing issues.	(8)
1 6		Inventory management optimizes stock levels, ensuring timely product availability, minimizing holding costs, and enhancing overall distribution network efficiency. – Explanation 4 marks	(8)
PART D (Compulsory Question)			
1 7		A. – 5 marks The company can concentrate on solution based selling approach as most of the clients may be looking for business improvement & problem rectification. Solution-Based Selling Approaches: Overcoming Objections: Effective Closing Techniques Also invest in training & Development of the sales team particularly focussing on sales presentations. B. – 5 marks Building Long-Term Partnerships and Relationship Selling Techniques: Advanced Forecasting Methods and Predictive Analytics in Sales Company should invest in the above areas for better result. Sales team should be trained & Motivated. They should be given responsibility & empowerment in the job. Above points can be explained.	(10)

SET 1
UNIVERSITY OF CALICUT **………. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR**
Course Code: BUS 4EM 05
Course Name: SUSTAINABLE AND SOCIAL MARKETING
Max. Marks: 60   Duration: 3 Hours
PART A
Answer all questions, each carries 2 marks.

1	Define Social Marketing and highlight its differences from commercial sector Marketing and Non-profit Marketing.
2	Explain the six building blocks of persuasion in strategic marketing communication and how they can be applied to societal marketing strategy.
3	Discuss the key principles and drivers of sustainable marketing and how they address challenges and technological responses.
4	Describe the Sustainability Marketing Mix and explain the transition from cradle-to-grave to Cradle-to-cradle approach in sustainable marketing.
5	Outline the ethical issues in social marketing, including Pricing, Greenwashing, Blue washing, and Whitewashing, and propose strategies to address them.
	PART B
	Answer any FOUR questions from this section. Each question carries 4 marks.
6	Explain how Social Marketing differs from other behavior change approaches, such as education and law, and its relevance in addressing social issues in the Indian context.
7	Discuss the role of branding, positioning, and framing as tools for setting and conveying the value and benefits of behavioral change in societal marketing strategy.
8	Analyze the concept of Circular Economy and its significance in sustainable marketing practices.
9	Evaluate the importance of sustainability in product development and its impact on consumer behavior and preferences.
10	Critically examine the challenges and opportunities in deploying strategic sustainable marketing, emphasizing the shift from products to customer solutions.
11	Assess the significance of developing Sustainability Marketing Standards and Strategies, including value chain analysis and marketing audit, in promoting ethical practices in social marketing.
	PART C
	Answer any THREE questions from this section. Each question carries 8 marks
12	Develop a social marketing plan for addressing a prevalent social issue in the Indian context, including situation analysis, target audiences, objectives, and goals, barriers, benefits, and intervention strategies.
13	Design a sustainable marketing campaign for a product or service, incorporating the principles of sustainable marketing, Circular Economy, and the Sustainability Marketing Mix.
14	Critically evaluate the effectiveness of a recent social marketing campaign in addressing ethical issues such as greenwashing or blue washing, providing recommendations for improvement.

1 5	Conduct a comprehensive analysis of a company's current marketing practices, focusing on its approach to sustainability and social responsibility, and propose strategies for enhancing its sustainability marketing efforts.
1 6	Explore the role of technology in overcoming marketing challenges and promoting sustainability, providing examples and recommendations for leveraging technology effectively in social marketing initiatives.
	PART D
	Compulsory Question. Question carries 10 marks
1 7	Discuss the importance of stakeholder engagement in sustainable marketing initiatives, highlighting its role in building trust, fostering collaboration, and driving positive social change. Provide examples and practical recommendations for effectively engaging stakeholders in sustainable marketing projects.

Scheme of Valuation/Answer Key
(Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT   **………. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR**
Course Code: BUS 4EM 05
Course Name: SUSTAINABLE AND SOCIAL MARKETING

Max. Marks: 60	Duration: 3 Hours

PART A
Answer all questions, Each carries 2 marks.

1	- 1 Mark for defining social marketing
	- 1 Mark for highlighting differences with commercial sector marketing
2	- 1 Mark for explaining six building blocks
	- 1 Mark for application to societal marketing strategy
3	- 1 Mark for explaining the key principles and drivers
	- 1 Mark for addressing challenges and technological responses
4	- 1 Mark for describing the sustainability marketing mix
	- 1 Mark for explaining the transition to cradle-to-cradle approach
5	- 1 Mark for outlining ethical issues
	- 1 Mark for proposing strategies to address them

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6	- 2 Marks for understanding of social marketing principles and its differentiation from education and law-based approaches.
	- 2 Marks for the application of social marketing concepts to address social issues in the Indian context.
7	- 2 Mark for comprehensive explanation of branding, positioning, and framing.
	- 2 Marks for insightful discussion on how these tools contribute to setting and conveying value and benefits in societal marketing strategy.
8	- 2 Marks for clear understanding and analysis of circular economy concept.
	- 2 Marks for insight into its significance in sustainable marketing practices.
9	- 2 Marks for evaluation of the importance of sustainability in product development.
	- 2 Marks for analysing the impact of sustainability on consumer behaviour and preferences.
10	- 2 Marks for critical examination of challenges and opportunities in deploying strategic sustainable marketing.
	- 2 Marks for the emphasis on the shift from products to customer solutions.
11	- 2 Marks for the assessment of the significance of sustainability marketing standards and strategies.
	- 2 Marks for the discussion on how value chain analysis and marketing audit contribute to promoting ethical practices in social marketing.

PART C

Answer any THREE questions from this section. Each question carries 8 marks

	- 2 Marks for situation analysis - social issues; analysis of relevant data and statistics.
12	- 1 Mark for identification and description of primary and secondary target audiences.
	- 1 Mark for clearly and specifically stating the objectives and goals aligned with addressing the social issue.
	- 2 Marks for the identifying the barriers preventing behaviour change, highlighting

	benefits of adopting desired behaviour, and stating comprehensive intervention strategies addressing identified barriers.
	- 2 Marks for stating the coherence and organization of the social marketing plan, Creativity and innovation in proposed strategies.
1 3	- 2 Marks for applying the sustainable marketing principles such as sustainability, equity, and societal well-being.
	- 2 Marks for incorporating circular economy principles, such as resource efficiency and waste reduction.
	- 2 Marks for the application of marketing mix (4Ps) within the context of sustainability.
	- 2 marks for feasibility of the campaign in real-world implementation, and for stating the potential impact on sustainability and societal well-being.
1 4	- 2 Marks for identification and explanation of ethical issues like greenwashing, or blue washing.
	- 2 Marks for assessing the campaign's success in addressing ethical concerns
	- 2 Marks for the recommendations to enhance the campaign's effectiveness.
	- 2 marks for the critical analysis into the campaign's strengths and weaknesses.
1 5	- 2 marks for assessment of current practices of the company's approach to sustainability and social responsibility.
	- 2 Marks for developing strategies to improve sustainability marketing effort.s
	- 2 Marks for feasibility and practicality of proposed enhancement strategies.
	- 2 Marks for stating the relevance and integration of course concepts in the analysis and proposed strategies.
1 6	- 2 Marks for identification and explanation of technologies used in promoting sustainability
	- 2 Marks for providing relevant examples of technology in social marketing initiatives, and offering actionable recommendations for leveraging technology effectively.
	- 2 Marks for critical evaluation of the role of technology in overcoming marketing challenges and promoting sustainability.
	- 2 Marks for the demonstration of innovative thinking and insight into the potential of technology in social marketing initiatives.
	PART D **(Compulsory Question, 10 marks)**
1 7	- 2 Marks for clear explanation of stakeholder engagement in sustainable marketing, and demonstration of understanding regarding the significance of stakeholder involvement.
	- 2 Marks for discussing how stakeholder engagement contributes to trust-building, and giving examples illustrating the impact of trust on sustainable marketing initiatives.
	- 2 Marks for stating ways in which stakeholder engagement promotes collaboration, and explaining how collaboration enhances the effectiveness of sustainable marketing efforts.
	- 2 Marks for explaining the connection between stakeholder engagement and driving

	social change, and giving examples for stakeholder engagement has led to tangible social impact. - 2 Marks for providing relevant examples to support the examples, and giving practical recommendations for effectively engaging stakeholders in sustainable marketing projects.

SPECILIZATION

SET 1

UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EH 01
Course Name: Management of Self and Others

Max. Marks: 60			Duration: 3 Hours

PART A

Answer all questions, each carries 2 marks.

			Marks
1		Define Parent Ego	(2)
2		What is broken record in assertiveness training	(2)
3		Write a short note on emotions	(2)
4		What do you mean by burnout?	(2)
5		What is CBT	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Explain the importance of assertiveness training	(4)
7		Guilford's Structure of Intellect (SI) Model of creativity	(4)
8		Explain Sensitivity training with its importance	(4)
9		Explain counselling process	(4)
10		Discuss various strategies for ensuring Work Life Balance	(4)
11		Discuss the importance time management in work place	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Explain different types of transactions?	(8)
13		What do you mean by assertive rights, explain the uses of Assertiveness Training	(8)
14		"Emotional Intelligence is considered as 21st century skill'. Discuss	(8)
15		Discuss REBT with its ABC Model	(8)
16		Discuss various strategies for coping with stress	(8)

PART D (Compulsory Question, 10 marks)

17		Recently, you were promoted to the position of manager of your department. One member of your group who now reports to you,	(10)

Ashish, is upset that you were given the promotion over him. Although he is known as the company expert on technical matters in his field, lately his work has been slipping. On more than one occasion he has left work early, arrived late and missed several deadlines on monthly reports. You are concerned because you consider him as a valuable employee of your staff and an asset to the company. Since you are new to your position, you know that you must depend on his expertise to keep the group on track, as you require more time to learn more about your new responsibilities. Ashish has been known to be difficult to deal with and has developed a reputation as a scientific 'Prim Donna'. In a meeting the other day, several of your peers (and your boss) were joking about Ashish's occasional superior attitude toward others. His attitude and behaviour on the job are not consistent with the norms your company associates with its management staff. Ashish seems to believe that he's put in lot of his time, effort and energy in the company and that the company owes it to him to grant him a promotion. You believe he has the talent, skills and knowledge to make excellent contributions if his attitude improves.

Questions:
1. How do you manage your colleague in this situation?
2. Discuss the role of counselling skills in this context
3. Explain the importance of counselling skills for managers in workplace

SET 1
Scheme of Valuation/Answer Key   (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT   .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EH 01
Course Name: Management of Self and Others

Max. Marks: 60			Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		Definition, sub compartments of parent ego	(2)
2		Brief the method with an example	(2)
3		Define emotions, mention primary emotions	(2)
4		Briefly explain with its consequence	(2)
5		Explain CBT concept and its 1-2 applications	(2)

		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Concept of assertiveness, training and its applications/importance	(4)
7		Note on creativity, explain the model	(4)
8		Note on sensitivity training and its organizational applications	(4)
9		Define counselling and its stages, either three stages or five stage can be explained	(4)
10		Importance of WLB and its strategies	(4)
11		Concept of time management and priority matrix can be briefed	(4)

		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		Write about transactions in TA, explain three types and sub areas, mention examples	(8)
13		Mentions 4-6 assertive rights, explain the importance of AT	(8)
14		Explain with various dimensions of EI	(8)
15		Explain irrational thinking/belief, explain ABC concept, mention example	(8)

16		Explain 3-5 personal and organizational strategies for managing stress	(8)
		PART D (Compulsory Question)	
17		Briefing the case	
		Identify the managerial issue	
		How do you manage your colleague in this situation?	
		General views are acceptable	
		Discuss the role of counselling skills in this context	
		As manager how can you use counselling skills	
		Explain the importance of counselling skills for managers in workplace	
		Explain various application counselling skills, including performance counselling	

SET 1

UNIVERSITY OF CALICUT

.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EH 02

Course Name: Human Resource Planning and Retention

Max. Marks: 60		Duration: 3 Hours

PART A

	Answer all questions, each carries 2 marks.	Marks
1	Describe employer branding	(2)
2	Weighted application blank	(2)
3	Write a short note on probing in interviews	(2)
4	Explain buddy system	(2)
5	Bad hiring	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		"An effective labour demand forecast is critical to the success of human resource planning process in organizations" – explain. Describe anu four approaches to labour demand forecast.	(4)
7		How do organizations evaluate recruiting effectiveness? Explain.	(4)
8		Explain the concept of behavioural competency-based interview	(4)
9		Explain psychological contract. Discuss the impact of psychological contract on talent retention and organizational performance.	(4)
10		"Short term and fixed term employments are going to be the order of the day in the new normal business environment" Analyse the pros and cons of short term and fixed term employment as an emerging human resource management challenge.	(4)
11		What is workload analysis? Explain the benefits of workload analysis.	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Describe the process of job analysis	(8)
13		Explain the sources of recruitment, both internal and external	(8)
14		Explain various types of interviews used in hiring process. Why behavioural interview / competency-based interview is considered more reliable and valid than other methods of interviews?	(8)
15		A well thought out socialization programme is essential for all new employees whether they have experience or not". Explain why you	(8)

		agree or disagree with this statement by detailing the essential purpose of such a programme.	
1 6		Analyse various methods of releasing an employee from the organization.	(8)

PART D (Compulsory Question, 10 marks)

1 7		"The consequence of excessive unplanned employee turnover is significant and costly both from the perspective of the organization and employee". Critically analyse the statement by explaining the tangible and intangible benefits of having robust talent retention strategy for organizations through following an ROI methodology.	(10)

<table>
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Scheme of Valuation/Answer Key	
(Scheme of evaluation (marks in brackets) and answers of problems/key)	
UNIVERSITY OF CALICUT	
………….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR	
Course Code: BUS 3EH 02	
Course Name: Human Resource Planning and Retention	

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Mention the conceptual understanding with example	(2)
2		Mention the conceptual understanding and mention the significance/characteristics	(2)
3		Mention the application and its importance in the context of interviews	(2)
4		Provide the conceptual clarity and importance	(2)
5		Provide the conceptual understanding with suitable illustration	(2)

PART B

6		Mention the significance and the approaches	(4)
7		Mention the methods and approaches in evaluating	(4)
8		Mention the concept, usefulness and characteristics	(4)
9		Provide the conceptual clarity and the linkage with the concerned HR functions	(4)
10		Evaluate the practice based on the merits and demerits in practice	(4)
11		Mention the concept and the benefits	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Mention the steps involved with explanation and relevant example	(8)
13		Write short note on internal and external sources.	(8)
14		Mention the types with explanation. Compare and contrast	(8)

15		Provide an evaluation with reasons	(8)
16		Mention the methods and processes	(8)
PART D (Compulsory Question)			
17		Provide a brief description on the specific context/problem, conceptual clarity, tangible and intangible benefits using ROI methodology.	(10)

SET 1

UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EH 03

Course Name: HR Analytics

Max. Marks: 60			Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Briefly state any two pitfalls of HR analytics.	(2)
2		Describe an advantage and one disadvantage of employee benchmarking.	(2)
3		Differentiate between reliability and validity of a measure.	(2)
4		Describe any two benefits of employee performance prediction.	(2)
5		List any three different sources of HR data and describe the structure.	(2)

PART B
Answer any FOUR questions from this section. Each question carries 4 marks.

6		Describe the four levels in PCMM.	(4)
7		Employee turnover rate and employee productivity rate are used to measure engagement in an organization. Elaborate what these rates signify and compare the conclusions that can be drawn from them.	(4)
8		Identify the factors that are critical when choosing an ATS.	(4)
9		AI can compound hidden biases in HR decision making. Critique this statement.	(4)
10		Two factors were identified that could predict employee performance – their intelligence (beta = 0.41, sig. = 0.06) and their score in simulation exercise (beta = 0.45, sig. = 0.03). At 5% confidence, which factor is useful for predicting performance?	(4)
11		Evaluate the ethical considerations which need to be kept in mind while developing data-based HR decision making.	(4)

PART C
Answer any THREE questions from this section. Each question carries 8 marks

12		Explain the four levels of HR analytics proficiency in an organization.	(8)
13		You have been asked to build a HR dashboard for diversity and inclusion. Identify the metric that you will use for the same.	(8)
14		There are two recruitment companies that have been contracted to help your organization with the recruitment. List and elaborate on the measures you will use to compare	(8)

		which company is more useful for your organization.	
1 5		You are the training manager of a sales person training program that is going to commence in your organization **after** another 2 months. Elaborate the measures you will take to evaluate training effectiveness.	(8)
1 6		Differentiate between the data obtained through interview questions in an exit interview and responses to an employee satisfaction scale, and the analysis you will use.	(8)
PART D (Compulsory Question, 10 marks)			
1 7		CEO of ABC organization is planning to strengthen the company's decision-making using Data Analytics. She is particularly concerned that the Human Capital decisions should be data driven. Describe the steps that will be required to convert the HR processes into one that is data driven.	(10)

SET 1

Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)

UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EH 03

Course Name: HR Analytics

Max. Marks: 60			Duration: 3 Hours

PART A			
Answer all questions, each carries 2 marks.			Marks
1		Poor data quality Different data sources that are not compatible with one another Issues with data privacy Human bias within the analytics.	(2)
2		Advantage: Improve employee performance to match industry standards Disadvantage: Set goals which are out of reach of employees, when not used in context.	(2)
3		Reliability is consistency of measure Validity is accuracy of measure.	(2)
4		Identify areas for training and development. Identify potential candidates for succession planning.	(2)
5		HRIS Business data Employee survey	(2)
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		Inconsistent management People management Competency management Capability management Change management	(4)
7		Employee turnover rate – who leaves the organization within a given time frame – provides insight into the organization's ability to retain talent and reflects the effectiveness of recruitment, onboarding strategies. Lag measure. Employee productivity rate – measures how efficiently employees perform tasks and contributes to organization's objectives. It provides insight into company process and system efficiency and effectiveness. Lead measure.	(4)

8		Budget	(4)
		Workflow	
		Features	
		Options in the market	
		Upgradations	
9		For: Hidden biases may become compounded if there is no transparency in algorithms used to support decision making.	(4)
		Against: Biases can be identified using AI and used to improve decision making in HRM.	
10		Score in simulation exercise – beta is significant.	(4)
		Intelligence – beta is not significant.	
11		AI models – Identify right candidate in recruitment	(4)
		Chatbots – Answer FAQs.	
		AI based LMS – Personalise training and development for employees	
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		Descriptive	(8)
		Diagnostic	
		Predictive	
		Prescriptive	
13		Employee happiness	(8)
		Retention	
		Promotion matrices	
		Pay equity	
14		Number of candidates per opening	(8)
		Interview to offer ratio	
		Staff retention rate	
		Candidate satisfaction rate	
		Hiring manager satisfaction	
15		Previous months sales person performance measures for all sales persons.	(8)
		Sales person performance measures after the training for control group and experiment group sales persons.	
16		Exit interview – qualitative data – content analysis	(8)
		Employee satisfaction scale – quantitative data – parametric and non-parametric analysis	
PART D (Compulsory Question)			

17		**Data Driven Decision Making Model:**	(10)
		Define objectives based on HR functions	
		Identify methods and collect data.	
		Clean, organize and analyse data.	
		Draw conclusions based on objectives.	

SET 1
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EH 04
Course Name: Performance Management

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Explain the concept and meaning of performance management	(2)
2		Differentiate between vision and mission	(2)
3		Describe how MBO functions as a performance appraisal method	(2)
4		Why post-appraisal feedback is important in managing employee performance	(2)

5		Illustrate balanced scorecard	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Apply expectancy theory in the area of performance management	(4)
7		Analyse, why a manager needs to do strategic planning before s/he starts doing anything for managing performance.	(4)
8		Analyse the process of performance appraisal	(4)
9		Explain the significance of benchmarking in performance management	(4)
10		Explain how the management of performance and training and development are linked	(4)
11		Evaluate 360-degree appraisal method in performance management	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Explain the significance of performance management in HRM	(8)
13		Analyse the importance of learning organization in the context of building performing culture	(8)
14		How People Capability Maturity Model (PCMM) helps the assessment of employee performance	(8)
15		Evaluate the importance of leadership styles in employee performance	(8)
16		How performance management plays a strategic role in business?	(8)
PART D (Compulsory Question, 10 marks)			
17		Having all kinds of resources in place, the company has made losses for the last three years. At this juncture, you step up as the new performance manager and in the very first meeting the CEO and other managers of various functional areas are waiting eagerly for your words. Now, your task is to give some hope by analysing the loss-making situation of the company using the performance management framework and share the possible reasons for the situation.	(10)

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EH 04
Course Name: Performance Management

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Mention the conceptual definition, meaning and characteristics	(2)
2		Provide the definitions and specific characteristics	(2)
3		Mention the concept and its practical implications in managing performance	(2)

4		Mention the significance of feedback in improving performance and in other HR functions	(2)
5		Explain the concept depicting the framework with an example.	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Mention the practical nuances of the theory	(4)
7		Mention the why part of the linkage between organizational level strategies and performance management	(4)
8		Explain the processes implied	(4)
9		Mention the importance, provide conceptual clarity, the linkage	(4)
1 0		Describe the linkage, by explaining how post performance appraisal – the insights derived – help planning and implementation of training and development function.	(4)
1 1		Provide the conceptual clarity and an evaluation based on it merits and demerits	(4)

PART C

Answer any THREE questions from this section. Each question

carries 8 marks			
1 2		Explain the theoretical and practical implications	(8)
1 3		Mention the concept of learning organization and how part of the question	(8)
1 4		Provide the conceptual clarity regarding PCMM and the processes implied	(8)
1 5		Mention how different leadership styles related to the increase or decrease of performance	(8)
1 6		Explain the linkage between the business strategy and performance management as a functional area	(8)
PART D (Compulsory Question)			
1 7		Provide a brief description about the scenario, identify the key problem, its significance in the overall business, propose solutions (what you will be doing, if you were in the position), evaluate the merits and demerits and mention alternative, if any.	(10)

UNIVERSITY OF CALICUT

.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EH 05

Course Name: Compensation and Benefits Management

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		What are the principles of reward determination?	(2)
2		Write a descriptive note on at least three determinants of employees pay structure	(2)
3		Write a descriptive note on dearness allowance	(2)
4		What are the major approaches adopted while fixing the Cost-to-Company	(2)
5		Write a short note on linking pay and productivity	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4

		marks.	
6		Suggest some methods of adopting the broad-bush reward strategy in short notes.	(4)
7		What are the essential information to be taken into consideration while analysing the market rate analysis for fixing pay? Explain	(4)
8		What are the exemption criteria of the Minimum Wages Act? Explain.	(4)
9		Write a short essay on Hay Group Executive Survey.	(4)
10		Write a short essay on incentive plan.	(4)
11		Write a note on the Equal Remuneration Act with some key amendments in place.	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Evaluate Mechanistic and Organic compensation strategies.	(8)
13		What are the steps involved in establishing the pay rates? Explain them in short.	(8)
14		What are the provisions of Payment of Wages Act 1936?	(8)
15		What are the major ingredients of executive compensation?	(8)

16		What are the four major purposes for which incentives are provided? Explain them with suitable examples.	(8)

PART D (Compulsory Question, 10 marks)

17		XYZ Corporation faces declining employee motivation despite competitive salaries. Despite industry-standard compensation packages, productivity remains stagnant, and turnover rates are increasing. The HR department conducted surveys revealing that employees seek more than just monetary rewards. They desire recognition, career growth opportunities, and work-life balance. Understanding this, the company revamped its total rewards system, integrating performance-based incentives, wellness programs, flexible work arrangements, and professional development opportunities. Consequently, employee engagement soared, absenteeism plummeted, and productivity surged by 20%. Incentives and benefits play a vital role in total reward system. Justify.	(10)

		SET 1	
		Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)	
		UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR	
		Course Code: BUS 3EH 05	
		Course Name: Compensation and Benefits Management	
Max. Marks: 60		Duration: 3 Hours	

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Mention the principles	(2)
2		Mention any determinants with short explanation	(2)
3		Provide the conceptual clarity and how to calculate	(2)
4		Mention the major approaches with short explanation	(2)
5		Provide the practical aspects of linking pay and productivity	(2)

PART B

6		Mention the methods with specific illustrations	(4)
7		Mention what and how of the given scenario	(4)
8		Provide an understanding about the exceptions	(4)
9		Provide a clear understanding with possible illustrations	(4)
10		Mention what, why and how of incentive plan	(4)
11		Provide clear understanding with specific amendments	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Compare and contrast the strategies	(8)
13		Mention the steps and the practical aspects	(8)
14		Mention the specific provisions with its practical implications	(8)
1		Mention the major ingredients and implications	(8)

5			
1 6		Mention the why part of incentives with examples	(8)
PART D (Compulsory Question)			
1 7		Summarize the scenario, Provide the conceptual understanding, significance, examples, reasons, merits, demerits, and practical implications	(10)

SET -1

UNIVERSITY OF CALICUT ……… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EH 01

Course Name: Industrial Relations

Max. Marks: 60
Duration: 3 Hours

PART A		
	Answer all questions, each carries 2 marks.	Marks
1	Define John Dunlop's Systems Theory in Industrial Relations.	(2)
2	Describe the concept of industrial democracy.	(2)
3	Productivity bargaining is a useful concept for managers. Explain/Illustrate.	(2)
4	Identify positive disciplinary interventions in the workplace.	(2)
5	Explain the difference between closure & lock-out.	(2)
PART B		
	Answer any FOUR questions from this section. Each question carries 4 marks.	
6	Summarize the classical role of the Government in promoting industrial relations.	(4)
7	Discuss Participative Management and bring out its Forms and Levels.	(4)
8	Elucidate the pre-requisites of collective bargaining understanding the processes involved.	(4)
9	Design a model grievance procedure.	(4)
10	Categorize the causes, manifestations, and effects of industrial disputes.	(4)
11	Compare and contrast conciliation and voluntary arbitration.	(4)
PART C		
	Answer any THREE questions from this section. Each question carries 8 marks	
12	Industrial Relations is becoming more and more bipartite with gradual withdrawal of the state from IR scene. Critically analyse the emerging trends in Industrial Relations in India.	(8)
13	"Trade Unions are beneficial for both employees and employers." Discuss.	(8)
14	"Collective agreements in India cover a very wide area of labour management relations in industry.". Do you agree? Justify your answer.	(8)
15	Devise a mechanism for ensuring that women are protected against sexual harassment in your company.	(8)
16	Examine the role of labour administrative machinery in resolving-Industrial disputes in India. Which method is the best, and why?	(8)
PART D (Compulsory Question, 10 marks)		
17	As per the International institute for labour studies, Worker's participation in management is the participation resulting from practices which increases the scope for employees share of influence in decision-making, at different tiers of organizational hierarchy with concomitant assumption of responsibility. Argue a case in favour of the above.	(10)

SET – XX			
Scheme of Valuation/Answer Key			
(Scheme of evaluation (marks in brackets) and answers of problems/key)			
UNIVERSITY OF CALICUT ……… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR			
Course Code: BUS 4EH 01			
Course Name: Industrial Relations			
Max. Marks: 60			Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		Definition	(2)
2		Definition with example	(2)
3		Two advantages of PB	(2)
4		Two positive interventions	(2)
5		Two differences	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Minimum 4 classical roles of the Govt in the development Industrial relations	(4)
7		Minimum 4 forms and level of Participative Management	(4)
8		Minimum 4 pre-requisites with the process of CB	(4)
9		Standard Model of 7 steps	(4)
10		2 causes, 2 manifestations and 2 effects of Industrial dispute	(4)
11		3 Comparison and 2 contrasting points	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		Minimum 8 points of critical analysis	(8)
13		4 benefits for employee and 4 benefits of employers	(8)
14		8 points of justification	(8)
15		A mechanism where women are protected - 8 ways	(8)
16		8 roles of labour administrative mechanism	(8)
		PART D (Compulsory Question)	
17		Detailed case which gives employees role in decision making - the advantages, including the limitations	(10)

SET 1

UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EH 02

Course Name: International Human Resource Management

Max. Marks: 60			Duration: 3 Hours

PART A		
	Answer all questions, each carries 2 marks.	Mark s
1	Define polycentric orientation of business.	(2)
2	Stare the relevance of cross-cultural sensitization.	(2)
3	Explain the concept of networking.	(2)
4	Discuss hybrid work model.	(2)
5	Elaborate on the matrix structure of organization.	(2)
PART B		
	Answer any FOUR questions from this section. Each question carries 4 marks.	
6	Illustrate green field investment with appropriate example.	(4)
7	Assess the PESTLE analysis as a tool for understanding the business environment.	(4)
8	'Global competencies demand upskilling by human resources. Justify the statement.	(4)
9	Comment on 'free trade area'.	(4)
10	Evaluate the role of multilateral trade agreements.	(4)
11	Examine Hofstede's Cultural Dimensions.	(4)
PART C		
	Answer any THREE questions from this section. Each question carries 8 marks	
12	Interpret the evolution of international human resource management.	(8)
13	Appraise the scope of diversity at the workplace.	(8)
14	Outline the importance of global management development strategies.	(8)
15	Relate to the role of the BRICS Bank in a global business environment.	(8)

1 6		Analyse 'knowledge-based organization'.	(8)

PART D (Compulsory Question, 10 marks)

| 1 7 | | Imagine that you have recently been hired as a human resources consultant by a Canadian multinational enterprise (MNE) called *Aero*. Aero designs, manufactures and sells commercial airplane engines and fuselages worldwide. It currently has over 1,000 employees in its three locations, including 500 at its global headquarters in Canada, 300 at a manufacturing plant in the U.S., and now over 200 at its newest manufacturing plant in Mexico.

The firm is having problems communicating and sharing its corporate values and policies with its newest employees in Mexico. The only experience Aero has had in opening a new subsidiary prior to Mexico was in the U.S., where corporate values and policies were taken up by American employees with little difficulty. The problems in the Mexican plant seem to centre around poor communications between the managers, who are mostly Canadian, and its new employees, who are mostly from Mexico.

"We want our corporate culture to be the same everywhere," explains Aero's CEO, Ms. Mary Avery, to you over lunch. "We want everything we do in Canada to be the accepted, standard practice across all of our locations, but that just doesn't seem to be getting across to our employees in Mexico." Avery continues by telling you that all new employees are trained in Aero's corporate culture via discussions with their managers and corporate brochures/reading materials. She says that her Canadian managers in Mexico are frustrated with the Mexican workers' abilities to learn Aero's culture and that, as a result, productivity at the plant has been negatively impacted.

You investigate the issue by speaking with managers and employees at the new subsidiary in Mexico. The managers complain that employees at the new plant do not speak their mind very often, and often seem to stress harmony with each other over learning Aero's culture. Managers are also frustrated that staff meetings frequently start late due to the lateness of employees. The employees, who are younger than their managers on the average, are frustrated that they are not told exactly how to do their tasks; instead, they are told to read their employee manuals for guidance. They are concerned that Aero managers are too impatient with them about learning the policies. They feel they have been left to their own devices to figure out how things work, which often causes them to stay late at work. What is more, staying late on | (10) |

their shifts often causes them to be late for staff meetings, where they are often berated by managers for not acting like "good Canadian employees".

After your examination you become convinced that the problem Aero is experiencing relates to culture, and you prepare your report accordingly.

   i.   What is the definition of culture?

   ii.   How is culture typically measured in the context of international human resource management?

  iii. In your opinion, with its expansion into Mexico, at which stage of internationalization is Aero? Do you think Aero's management is taking a more standardized or a more localized approach to their human resources management? Why do you think this?

  iv. Select one of Hofstede's five cultural dimensions to explain to Avery the main differences between Aero's Canadian HQ and its Mexican subsidiary in terms of culture. Explain why you selected this dimension as the primary source of the problem between the Aero HQ and its Mexican plant.

  v.   In your opinion, what are three ways that Canadian managers could demonstrate higher intercultural competence at Aero's Mexican subsidiary?

UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EH 02

Course Name: International Human Resource Management

Max. Marks: 60			Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Definition is adequate.	(2)
2		Why is it important to be sensitive to different cultures?	(2)
3		Meaning and importance.	(2)
4		Define the model, how it is different from the traditional work model.	(2)
5		Definition and graphic representation.	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Definition and example.	(4)
7		Explanation of the six dimensions - P,E,S,T,L,E.	(4)
8		Why employers and employees should upskill to remain globally competitive.	(4)
9		Explanation of concept, characteristics/benefits, with at least one example.	(4)
10		Explanation of concept, characteristics/benefits, with at least one example.	(4)
1		All six dimensions, adequately explained, preferably with examples.	(4)

1			

PART C

Answer any THREE questions from this section. Each question carries 8 marks

1 2		Outline of evolution from traditional to modern day/ strategic HRM.	(8)
1 3		Explanation of the concepts-Diversity, Equity, Inclusion and Belonging (DEIB), with appropriate examples.	(8)
1 4		Relevance and need of global management development with suitable examples.	(8)
1 5		BRICS-purpose, role, benefits	(8)
1 6		Concept explanation with appropriate example, characteristics and benefits	(8)

PART D (Compulsory Question)

1 7		(i) Understanding of the concept of culture in own words/perspective. (ii) How can you evaluate the culture of an organization/how is it manifested? (iii) Mention the stage of internationalization with justification. Mention whether standardized or localized approach with valid reasons. (iv) Choose any one of Hofstede's cultural dimensions and elaborate in detail with relevance to the particular case. (v) Critical and creative/out-of-the-box thinking encouraged. Novel perspectives with justification.	(10)

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UNIVERSITY OF CALICUT

.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EH 03

Course Name: Management of Change and Organizational Development

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Write a short note on environmental analysis techniques	(2)
2		Explain cultural intelligence	(2)
3		Describe the potential sources of individual resistance to change	(2)
4		Explain the role of change agent in organizational change	(2)
5		'Organizational diagnosis' in OD	(2)

PART B

6		Define organizational change. Explain Schein's model of change	(4)
7		Explain the various types of transformational change	(4)
8		Briefly discuss the various strategies that may be used for overcoming resistance to change.	(4)
9		"Success of any change intervention is contingent on the level of urgency of the situation and authority of the change agent". Critically evaluate the statement by explaining the change agent's 'credibility' on effectively using various change levers.	(4)
10		Define OD. Explain the process of organization development	(4)
11		Who is a change agent? Explain the difference between an internal and external change agent	(4)
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		Explain two process-based change models	(8)
13		Explain what drives organizational transformation	(8)
14		Discuss the various factors that contributing to resistance to change	(8)

15		"All HR professionals are destined to take up the role of an internal change agent during their professional life". Critically evaluate the statement by discussing the competencies required for an effective internal change agent.	(8)
16		Explain the phases in OD interventions	(8)

PART D (Compulsory Question, 10 marks)

17		A balanced approach in managing organizational transformation and transition is critical to the successful implementation of any large-scale change initiative". Discuss in detail the statement by comparing and contrasting the two processes.	(10)

	SET 1	

Scheme of Valuation/Answer Key

(Scheme of evaluation (marks in brackets) and answers of problems/key)

UNIVERSITY OF CALICUT

.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EH 03

Course Name: Management of Change and Organizational Development

Max. Marks: 60		Duration: 3 Hours

PART A

	Answer all questions, each carries 2 marks.	Marks
1	Mention the techniques and the how part	(2)
2	Provide the conceptual clarity	(2)
3	Mention the sources with explanation	(2)
4	Explain how a change agent acts	(2)
5	Provide the conceptual clarity and the processes	(2)

PART B

6		Provide the definition and explain the model	(4)
7		Mention the various types with examples	(4)
8		Mention the strategies with practical implications	(4)
9		Mention the credibility aspects of the change agent in change management	(4)
10		Mention the conceptual understanding and the process	(4)
11		Compare and contrast the characteristics of internal and external change agents	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Mention the characteristics and practical implications	(8)
13		Mention the driving forces with practical implications	(8)
14		Provide the various factors and how	(8)
15		Provide the competencies and how it drives an effective change agent	(8)

16		Mention the phases with explanation	(8)
PART D (Compulsory Question)			
17		Summarise the scenario, Compare and contrast the concepts, characteristics, applications, benefits, demerits, and practical implications	(10)

		SET 1	

UNIVERSITY OF CALICUT

.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EH 04

Course Name: Competency based Human Resource Management

Max. Marks: 60		Duration: 3 Hours

PART A

	Answer all questions, each carries 2 marks.	Marks
1	How do knowledge and know-how differ from each other?	(2)
2	What are the steps involved in competency mapping?	(2)
3	Use a model and organize competencies	(2)
4	Explain the various types of competency assessment tools available.	(2)
5	Give a descriptive note on a framework of competency based HRM that satisfies the stakeholders.	(2)

PART B

6		Define the term behaviour and associate some of the behavioural competencies to the definition.	(4)
7		Explain various approaches of competency mapping.	(4)
8		What are the five stages of competency as discussed on the BIM model?	(4)
9		What are the ways in which direct observation as competency assessment tool can be used?	(4)
10		What are the main goals addressed by the competency-based performance appraisal?	(4)
11		What are the ways in which leaderless group discussion as competency assessment tool can be used?	(4)

PART C

Answer any THREE questions from this section.   Each question carries 8 marks

12		Based on the challenges and benefits, evaluate the application of competency based HRM in today's organizational context.	(8)
13		Though education and hospitality sectors are service oriented, what are the major differences in their competency requirements?	(8)
14		How would you classify the competency models? Explain.	(8)
1		How assessment centres help assessing the competencies?	(8)

5			
1 6		Discuss the pros and cons of competency-based pay.	(8)
PART D (Compulsory Question, 10 marks)			
1 7		In the IT sector, TechGen Inc. struggles with talent retention and skill gaps amidst rapid technological advancements. Adopting competency-based HR management, TechGen defines core competencies such as problem-solving, adaptability, and innovation. HR conducts comprehensive competency assessments to identify strengths and areas for development among employees. Subsequently, tailored training programs and career paths are established, aligning individual competencies with organizational goals. While initially, implementation faced resistance due to change, the results speak volumes. TechGen witnesses a notable improvement in employee satisfaction, reduced turnover, and enhanced performance, affirming the effectiveness of competency-based HR practices in addressing industry-specific challenges. Design a competency-based HR/talent management practices relevant to the industry and give an objective review	(10)

<table>
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Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)			
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR			
Course Code: BUS 4EH 04			
Course Name: Competency based Human Resource Management			
Max. Marks: 60		Duration: 3 Hours	

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Provide the conceptual clarity with examples	(2)
2		Mention the steps with importance	(2)
3		Provide the application aspects using a theoretical model	(2)
4		Mention the various types with short explanation	(2)
5		Provide a short description	(2)

PART B

		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Provide the conceptual clarity and application part	(4)
7		Mention the various approaches with short explanation	(4)
8		Illustrate the BIM model and various stages	(4)
9		Explain the practical aspects of observation	(4)
10		Mention the why part of the concerned scenario	(4)
11		Provide the application aspects	(4)

PART C

		Answer any THREE questions from this section. Each question carries 8 marks	
12		Provide a critical evaluation mentioning pros and cons	(8)
13		Differentiate the domains and required competencies with application nuances	(8)
14		Mention the classifications with adequate explanations	(8)
15		Mention the practical ways and implications	(8)

1 6		Provide an evaluation based on the pros and cons	(8)
PART D (Compulsory Question)			
1 7		Summarise the scenario, creatively design and provide a review, specifying the merits, demerits, practical implications with evaluation	(10)

SET 1
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 4EH 05
Course Name: Management of Training and Development

Max. Marks: 60			Duration: 3 Hours

PART A			
Answer all questions, each carries 2 marks.			Marks
1		Differentiate between Training and Development	(2)
2		Explain the importance of Learning Management System.	(2)
3		What is a Lesson Plan	(2)
4		What is Formative Evaluation	(2)
5		What do you mean by Learning Organization	(2)
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		Discuss the principles of Adult Learning Theory	(4)
7		Differentiate between Synchronous and Asynchronous e-learning	(4)
8		'Training and development is a heart of any business, which cannot be outsourced'. Discuss	(4)
9		Briefly explain ADDIE model of training	(4)
1 0		Discuss the role of learning theories in training design	(4)
1 1		Explain the importance of TNA	(4)
PART C			
Answer any THREE questions from this section. Each question carries 8			

		marks	
1 2		Explain the importance of team building in organisational development? Explain with examples	(8)
1 3		What are the different methods used in Management Development	(8)
1 4		Explain Kirkpatrick's model of training evaluation with examples	(8)
1 5		Discuss Robert Gagne's nine events of instructions	(8)
1 6		'Training is expensive, without training it is more expensive' Discuss	(8)
PART D (Compulsory Question, 10 marks)			
1 7		One Monday morning Sanjay Nagpal, a recent recruit from a reputed management institute in Manipal walked into the sales office at Chennai as a new sales trainee. Raghavan, the Zonal Sales Manager for a large computer hardware firm was there to greet him. Raghavan's job consisted of overseeing the work of sales officers, field executives and trainee salesmen numbering over 50 of three areas namely Chennai, Bangalore, Trivandrum. The sales growth of computers, parts and other office equipment in his area was highly satisfactory especially in recent years - thanks to the developmental initiatives taken by respective State Governments in spreading computer education in offices, schools, colleges, banks and other institutions Raghavan had collected several sales reports, catalogues and pamphlets describing in detail the types of office equipment sold by the company. After a pleasant chat about their backgrounds, Raghavan gave Sanjay the collected materials and showed him to his assigned desk Thereafter Raghavan excused himself and did not return. Sanjay spent the whole day scanning the material and at 5.00 pm he picked up his things and went home. QUESTIONS 1 What do you think about Raghavan's training programme? 2. What type of sales training programme would you suggest? What method of training would have been best under the circumstances?	(10)

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 4EH 05
Course Name: Management of Training and Development

Max. Marks: 60			Duration: 3 Hours

PART A			
		Answer all questions, each carries 2 marks.	Mark s
1		Mention any four differences	(2)
2		Explain about LMS with its applications	(2)
3		Explain lesson plan with its contents	(2)
4		Explain summative evaluation with an example	(2)
5		Write about LO and its importance	(2)

PART B			
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Definition and five important postulates of ALT	(4)
7		Concept of e-learning, Explain the difference with examples	(4)
8		Discuss about outsourcing in training implementation Discuss pros and cons of training outsourcing (make or buy)	(4)
9		Discuss the five phases of training process	(4)
1 0		Explain any two learning theories and its role in training design	(4)
1 1		Define TNA, explain its applications	(4)

PART C			
		Answer any THREE questions from this section. Each question carries 8 marks	
1 2		Define Team building, explain various types/objectives, how it is helping in OD	(8)
1 3		Concept of MDP, discuss various on the job/off the job methods can be explained	(8)
1 4		Concept of Training evaluation, four levels of Model, its significance, and limitations	(8)
1 5		Various stages can be explained, with examples	(8)

1 6		Discuss the importance of training, what are the cost involved in training	(8)
PART D (Compulsory Question)			
1 7		• Summarise the case • Identify the managerial problem • Discuss the importance of induction training • Discuss suitability of various training methods in designing a training program	(10)

SPECILIZATIONSPECIALISATION – OPERATIONS, LOGISTICS & SUPPLY CHAIN MANAGEMENT

SET 1

UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EOM 01

Course Name: Logistics and Transportation Management

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		What is the definition of logistics?	(2)
2		What is Distribution Requirement Planning (DRP), and why is it important in logistics management?	(2)
3		What are the basic principles of transportation?	(2)
4		What is the primary purpose of packaging in marketing?	(2)
5		What are the primary differences between Less-than Container Load (LCL) and Full Container Load (FCL) shipping methods?	(2)

PART B

		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Describe the role of warehousing and storage in facilitating efficient logistics operations.	(4)
7		Can you differentiate between distribution network planning and distribution network decisions?	(4)
8		How do geographic information systems contribute to transportation management?	(4)
9		Evaluate the effectiveness of electronic data interchange (EDI) systems in streamlining supply chain processes for packaging management.	(4)
10		How do identification codes, such as bar codes, contribute to efficient packaging management?	(4)
11		Explain the key documents required for import logistics?	(4)

PART C

		Answer any THREE questions from this section. Each question carries 8 marks	
12		Analyze the challenges and opportunities in implementing a logistics audit and control system in a multinational corporation.	(8)
13		Explain the role of distribution networks in enhancing customer satisfaction and market competitiveness for a global e-commerce company.	(8)
14		Compare and contrast the advantages and disadvantages of different transportation modes.	(8)
15		Explain the difference between primary, secondary, and tertiary packaging.	(8)

1 6		Propose strategies for optimizing delivery to distribution centres in export logistics.	(8)
		PART D (Compulsory Question, 10 marks)	
1 7		You are a logistics manager at a multinational corporation specializing in the export and import of consumer electronics. Your company is facing challenges in selecting the most efficient transportation mode for shipping its products internationally. Using your knowledge of transportation basics, modal characteristics, and trends in transportation, analyze the advantages and disadvantages of various transportation modes available for international cargo shipping. Consider factors such as speed, cost, reliability, and environmental impact. Additionally, discuss the role of communication systems, including automatic vehicle location systems and geographic information systems, in enhancing transportation efficiency and supply chain visibility. Provide recommendations for the most suitable transportation mode(s) for your company's specific needs, considering the nature of the products, destination countries, and cost-effectiveness. Justify your recommendations with relevant examples and industry trends.	(10)

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
BUS 3EOM 01
Course Name: Logistics and Transportation Management

Max. Marks: 60		Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		Definition of logistics - 2 marks ● Correct and comprehensive definition: 2 marks	(2)
2		Distribution Requirement Planning (DRP) and its importance - 2 marks ● Clear explanation of DRP : 1 mark ● Its importance provided: 1 mark	(2)
3		Basic principles of transportation - ● Correct identification of principles: 2 marks	(2)
4		Purpose of packaging in marketing ● Clear explanation of primary purpose: 2 marks	(2)
5		Differences between LCL and FCL shipping methods - Not provided in the simplified scheme. ● Definition pf LCL and FCL shipping methods- 1 marks ● Clear identification of differences: 1 mark	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		● Clear explanation of the role of warehousing and storage: 2 marks ● Demonstration of understanding of how warehousing contributes to logistics efficiency: 2 marks	(4)
7		● Clear differentiation between distribution network planning and decisions: 2 marks ● Explanation of each concept with relevant examples: 2 marks	(4)
8		● Explanation of GIS's role in transportation management: 2 marks ● Examples or illustrations of how GIS enhances transportation operations: 2 marks	(4)
9		● Assessment of EDI's effectiveness in streamlining supply chain processes: 2 marks ● Examples or case studies demonstrating the impact of EDI on packaging management: 2 marks	(4)
10		● Explanation of how identification codes enhance packaging management: 2 marks ● Examples illustrating the benefits of bar codes in packaging operations: 2 marks	(4)

1 1		● Identification and explanation of key import logistics documents: 2 marks ● Clarity and completeness in describing the purpose and significance of each document: 2 marks	(4)
	PART C	
	Answer any THREE questions from this section. Each question carries 8 marks	

1 2		● Analysis of challenges: 4 marks
		    ● Identification and explanation of challenges faced in implementing a logistics audit and control system: 2 marks
		    ● Depth of analysis demonstrating understanding of complexities: 2 marks
		● Analysis of opportunities: 4 marks
		    ● Identification and explanation of opportunities presented by implementing a logistics audit and control system: 2 marks
		    ● Depth of analysis demonstrating potential benefits and advantages: 2 marks
			(8)

1 3		● Explanation of distribution network role: 4 marks
		    ● Clear explanation of how distribution networks enhance customer satisfaction: 2 marks
		    ● Clear explanation of how distribution networks enhance market competitiveness: 2 marks
		● Depth of analysis: 4 marks
		    ● Demonstrating understanding of the impact and importance of distribution networks: 2 marks
		    ● Providing relevant examples or case studies to support the explanation: 2 marks
			(8)

1 4		● Clear comparison of advantages of different transportation modes: 3 marks ● Pointing out the disadvantages of different transportation modes: 3 marks ● Depth of analysis demonstrating understanding of the benefits of each mode: 2 marks	(8)

1 5		● Explanation of primary packaging: 3 marks
		    ● Clear explanation of primary packaging and its purpose: 1.5 mark
		    ● Depth of explanation demonstrating understanding: 1.5 mark
		● Explanation of secondary packaging: 3 marks
		    ● Clear explanation of secondary packaging and its purpose: 1.5 mark
		    ● Depth of explanation demonstrating understanding: 1.5 mark
		● Explanation of tertiary packaging: 2 marks
		    ● Clear explanation of tertiary packaging and its purpose: 1 mark
		    ● Depth of explanation demonstrating understanding: 1 mark
			(8)

1 6		● Proposal of strategies: 4 marks ● Clear and relevant strategies proposed for optimizing delivery	(8)

		to distribution centres: 2 marks	

		● Depth of analysis demonstrating understanding of export logistics challenges: 2 marks
		● Justification of strategies: 4 marks
		   ● Justification provided for each proposed strategy: 2 marks
		   ● Depth of analysis demonstrating the rationale behind each strategy: 2 marks	

		PART D (Compulsory Question)	

1
7
		1. Analysis of transportation modes' advantages and disadvantages (4 marks)
		
		   ● Clear identification and analysis of advantages and disadvantages of various transportation modes: 4 marks
		
		2. Discussion on the role of communication systems (3 marks)
		
		   ● Clear explanation of the role of communication systems, including automatic vehicle location systems and geographic information systems: 3 marks
		
		3. Recommendations for the most suitable transportation mode(s) (2 marks)
		
		   ● Well-justified recommendations based on the company's specific needs, product nature, destination countries, and cost-effectiveness: 2 marks
		
		4. Justification with relevant examples and industry trends (1 mark)
		
		   ● Clear justification provided with relevant examples and industry trends supporting the recommendations: 1 mark
			(10)

SET 1

UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EOM 02
Course Name: Warehousing & Inventory Management

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		What is WMS?	(2)
2		Name any two types of specialized warehouse and briefly explain its purpose.	(2)
3		Explain three bin system.	(2)
4		What is FIFO & LIFO?	(2)
5		Explain cross docking.	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Explain the importance of efficient warehouse design and layout.	(4)
7		Define RFID technology and explain its primary functions in inventory management.	(4)
8		Explore the significant role played by smart warehousing in enhancing traditional warehouse operations.	(4)
9		Examine the importance of location decisions in warehouse management. What factors should warehouse managers consider when selecting the optimal location for a warehouse facility?	(4)
10		Discuss the impact of AI and automation technologies, such as robots and conveyor systems, on warehouse costs and operational efficiency.	(4)
11		Outline safety protocols that should be followed in warehouse environments. How does adherence to safety protocols mitigate risks and improve employee well-being?	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		The monthly demand for the component is 5000units.The ordering cost is 20 Rs per order. The inventory holding cost is 20% of the unit cost which is 10 Rs per unit. The unit works for 300 days in a year. The safety stock to be maintained is 500units.The lead time of the supply is 5 days. Calculate the	(8)

		following.	
		i) Annual Demand ii) EOQ	
1 3		Explain the concept of Just-In-Time (JIT) inventory management. Provide a hypothetical scenario demonstrating its implementation.	(8)
1 4		Evaluate various storage and handling solutions commonly employed in warehouse design. Discuss their respective benefits and limitations.	(8)
1 5		Describe the role of a warehouse manager in overseeing warehouse operations. What skills and responsibilities are essential for effective warehouse management?	(8)
1 6		What are some key strategies and initiatives that warehouses can adopt to promote sustainability and environmental responsibility?	(8)
		PART D (Compulsory Question, 10 marks)	
1 7		Mr. Vinod, MD of M/s. Hot & Cold Foods Pvt. Ltd. is not happy recently on the performance of materials department in general and inventory in particular of his organization. He has given nod to his Materials Manager Mr. Purushothaman to appoint an Inventory Control Officer to revamp the department. MM, Mr. Purushothaman appointed Mr. Dheeraj as Inventory Controller to streamline the given assignment. He was given all the required data to analyse and take remedial action. i) Propose a remedial actions or strategies that Mr. Dheeraj could implement to improve inventory control and address the concerns raised by Mr. Vinod. ii) What are the potential consequences of poor inventory management?	(10)

SET 1
Scheme of Valuation/Answer Key   (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT   .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EOM 02
Course Name: Warehousing & Inventory Management

Max. Marks: 60			Duration: 3 Hours

PART A				
		Answer all questions, each carries 2 marks.		Marks
1		● Definition: WMS is software designed for optimizing warehouse operations. (1 mark) ● Purpose: Streamlines inventory management and warehouse processes. (1 mark)		(2)
2		● Cold Storage Warehouse: Stores perishable goods at controlled temperatures. (1 mark) ● Bonded Warehouse: Stores imported goods subject to customs duties. (1 mark)		(2)
3		● Inventory management method with active, reserve, and reorder bins. (1 mark) ● Ensures continuous supply and minimizes stockouts. (1 mark)		(2)
4		● FIFO (First In, First Out): Oldest inventory used first to prevent spoilage. (1 mark) ● LIFO (Last In, First Out): Most recent inventory used first for tax benefits. (1 mark)		(2)
5		● Strategy for direct transfer of goods from inbound to outbound vehicles. (1 mark) ● Reduces handling and storage costs. (1 mark)		(2)
PART B				

		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		● Efficient Design: Optimizes space utilization, streamlines workflows. (2 marks) ● Safety and Profitability: Reduces accidents, lowers operating costs. (2 marks)	(4)
7		● Definition: Uses radio waves for identification and tracking. (2 marks) ● Functions: Enables real-time tracking, improves accuracy. (2 marks)	(4)
8		● Integrates advanced technologies for optimization. (2 marks) ● Benefits: Enhances efficiency, accuracy, reduces costs. (2 marks)	(4)
9		● Importance: Location decisions play a crucial role in the overall efficiency and effectiveness of warehouse operations. (2 marks) ● Factors to Consider: Proximity to suppliers and customers, transportation access, labor availability, land costs, zoning regulations, and market demand. (2 marks)	(4)
10		● Cost Reduction: Minimizes labour costs, optimizes resources. (2 marks) ● Operational Efficiency: Enhances order accuracy, increases throughput. (2 marks)	(4)
11		● Key Protocols: Regular training, hazard identification. (2 marks) ● Minimizes accidents, ensures compliance. (2 marks)	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		Given: Monthly demand (D) = 5000 units Ordering cost (S) = Rs. 20 per order Inventory holding cost (H) = 20% of unit cost = 20% * Rs. 10 = Rs. 2 per unit Unit cost = Rs. 10 Working days in a year (N) = 300 days Safety stock = 500 units Lead time (LT) = 5 days i) Annual Demand: Annual Demand = Monthly demand * Number of working months = 5000 units/month * 12 months/year = 60,000 units/year (4marks) ii) Economic Order Quantity (EOQ): EOQ = √[(2 * D * S) / H] = √[(2 * 60,000 * 20) / 2] = 1095.45 units (approximately) (4 marks)	(8)
13		● JIT Concept: Minimize inventory holding costs by ensuring materials arrive exactly when needed. (4 marks) ● Scenario: Implement JIT by coordinating with suppliers for small, frequent deliveries based on production schedules. (4 marks)	(8)
14		● Common Solutions: Pallet racking, mezzanine floors, AS/RS, shelving units. (4 marks) ● Benefits and Limitations: Summarize advantages and disadvantages of each solution. (4 marks)	(8)

15		● Responsibilities: Inventory management, staffing, safety compliance, facility maintenance. (4 marks)	(8)
		● Essential Skills: Leadership, communication, problem-solving, analytical skills. (4 marks)	
16		● Adoption of renewable energy, energy-efficient technologies, optimization of transportation routes. (4 marks)	(8)
		● Collaboration with suppliers, recycling programs, adherence to environmental regulations. (4 marks)	
		PART D (Compulsory Question)	
17		i) Remedial Actions for Improving Inventory Control:	(10)
		a. Data Analysis: Identify trends and discrepancies in inventory data. (2 marks)	
		b. Inventory Optimization: Implement techniques like ABC analysis, JIT, EOQ. (3 marks)	
		ii) Potential Consequences of Poor Inventory Management:	
		a. Stockouts: Loss of sales, customer dissatisfaction. (2.5 marks)	
		b. Excess Inventory: Tie-up of working capital, increased holding costs. (2.5 marks)	

SET 1
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EOM 03
Course Name: Service Operations Management

Max. Marks: 60			Duration: 3 Hours
PART A			
Answer all questions, each carries 2 marks.			Marks
1		What do you understand by Servicescape Model?	(2)
2		What is Service Recovery and how does it work?	(2)
3		Define explicit and implicit service	(2)
4		What is gap in service quality?	(2)
5		What is meant by Taguchi method?	(2)
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		Explain the role of services in the changing scenario.	(4)

7		Explain the principles of service quality?	(4)
8		Classify the service facility location issues	(4)
9		Evaluate the process of New Service Development	(4)
10		Explain the dimensions of service quality according to SERVQUAL model?	(4)
11		Analyse the elements in the framework for formulating the strategic service vision.	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Analyse the role of technology in services encounter?	(8)
13		Elucidate various Inventory Management for Improved service Delivery?	(8)
14		What are the different Strategies for Matching Capacity of and Demand for Services	(8)
15		What are the challenges for different types of services?	(8)
16		Service failure may occur , but service recovery is critical . Analyse	(8)

PART D (Compulsory Question, 10 marks)

17		Case : Cathay Pacific Airways is an international airline based in Hong Kong, offering scheduled passenger and cargo services to over 100 destinations around the world. The airline owns Dragonair and is also a major shareholder in Air Hong Kong, an all-cargo carrier operating in the Asian region. Cathay Pacific and its subsidiaries and associates employ over 25,000 people worldwide, with around 18,600 staff in Hong Kong, making it one of Hong Kong's biggest employers. The airline is a founder member of the one world global alliance, whose combined network serves almost 700 destinations in 150 countries worldwide. The company's vision is to make Cathay Pacific the most admired airline in the world by: Ensuring safety comes first, by Providing 'Service Straight from the Heart', Encouraging product leadership and providing rewarding career opportunities. Angelique Tam was Cathay Pacific's Head of Customer Relations. She explained what was meant by 'Service Straight from the Heart': Service Straight from the Heart means that our staff have to be resourceful, and be able to find sensible on the spot solutions. They need to be dynamic and be proactive and find opportunities to excel and serve our customers well. We also expect them to show the highest standards of care and professionalism so they need to be fully committed. We want to create an experience that makes our customers feel welcome, comfortable, appreciated and above all, reassured. This is not as easy as it sounds. We need to be friendly but not overly intimate, caring but not over-attentive, efficient but not mechanical, consistent but with a willingness to be flexible, anticipating but not presumptuous and professional but very approachable. Not surprisingly Cathay Pacific has been the recipient of many awards for its service. It was named as Airline of the Year 2009 by Skytrax, and most admired company in Hong Kong by Wall Street Journal Asia in 2010. Questions : a) Briefly elucidate various strategies adopted by Cathay pacific to ensure their Quality-of-service delivery? b) Critically analyse the challenges for different types of services?	(10)

SET 1

Scheme of Valuation/Answer Key
(Scheme of evaluation (marks in brackets) and answers of problems/key)

UNIVERSITY OF CALICUT
……………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EOM 03

Course Name: Service Operations Management

Max. Marks: 60			Duration: 3 Hours

PART A			
		Answer all questions, each carries 2 marks.	Marks
1		● Servicescape is a model developed by Booms and Bitner to emphasize *the impact of the physical environment in which a service process takes place*. (1 mark) ● The model of servicescape consists of three elements, they are: a) ambient; (temperature, air quality, noise, music, and odor) b) arrangement and function; and (layout, equipment, and furnishings) c) sign, symbol, and artifacts. (1 mark)	(2)
2		● Service recovery is the process of restoring customer satisfaction after a service failure or dissatisfaction occurs. (1 mark) ● It typically involves acknowledging the issue, apologizing, offering a solution or compensation, and following up to ensure the customer's needs are met. (1 mark)	(2)
3		● Explicit service refers to the tangible or visible aspects of a service that are directly experienced by the customer, such as the physical environment or interactions with staff. (1 mark) ● Implicit service involves the intangible or underlying aspects of a service, including the quality of communication, reliability, and responsiveness, which may not be directly observable but significantly impact the customer experience. (1 mark)	(2)
4		● Service quality gaps are discrepancies between customer expectations and perceptions of the service provided (1 mark) ● These gaps can occur at various stages of the service delivery process, such as understanding customer expectations, setting service standards, and actual service delivery. (1 mark)	(2)
5		● The Taguchi method is a statistical approach to product and process optimization, aiming to minimize variation and improve quality. (1 mark) ● It emphasizes robust design by considering factors that affect quality during the development stage, leading to more reliable and cost-effective products. (1 mark)	(2)
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		Explain the role of services in the changing scenario. ● Discussing the significant role of services in economy (2marks) ● Explaining the application in each industry and with regard to technological changes (2marks)	(4)
7		Explain the principles of service quality? ● Explaining the different principles of service quality (customer focus, continuous improvement, employee involvement, process approach) (3marks) ● Providing examples for each principle(1marks)	(4)
8		Classify the service facility location issues? ● Detailing Four key factors or considerations relevant to service facility location with examples (4 marks)	(4)

9		Evaluate the process of New Service Development ? ● outline the concept of New Service Development (NSD) (1 mark) ● break down the process into stages or steps (3 marks)	(4)
10		Explain the dimensions of service quality according to SERVQUAL model? ● Explain the SERVQUAL model. (1 mark) ● Detail the five dimensions of service quality according to this model (3 marks)	(4)
11		Analyse the elements in the framework for formulating the strategic service vision. ● Explain what is service strategy (1mark) ● Detail the 4 elements of Strategic Service Vision (3 marks)	(4)
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		Analyse the role of technology in services encounter? ● Explain what is service encounter (2 mark) ● Discussing the significant role of technology and five modes of technology's contribution to the service encounter. (4marks) ● Explaining the application with examples (2marks)	(8)
13		Elucidate various Inventory Management for Improved service Delivery? ● Explain importance of service delivery (1 mark) ● outline several key inventory management strategies (JIT, ABC etc.) (5marks) ● additional explanation or examples for each strategy. (2 marks)	(8)
14		What are the different Strategies for Matching Capacity of and Demand for Services ● Explain the relevance of demand forecasting in service (2 marks) ● Detail the two different strategies -Level Capacity and Chase Demand(6marks)	(8)
15		What are the challenges for different types of services? ● categorize the challenges into distinct types of services (6marks) , ● Severity and complexity of challenges and additional examples (2 marks)	(8)
16		Service failure may occur, but service recovery is critical. Analyse ● Explain the concept of service recovery and its importance (3 marks) ● Analyse various approaches to service recovery (5 marks)	(8)
PART D (Compulsory Question)			
17		Case study: ● Introduction of the case (2 marks) ● Problems/challenges /Facts identified from the case (2 marks) ● Analysing the theoretical aspects of service quality using various models and application to the case (4 marks) ● Conclusion and recommendations (2 marks)	(10)

SET 1

UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EOM 04
Course Name: LEAN MANAGEMENT

Max. Marks: 60			Duration: 3 Hours

PART A			
	Answer all questions, each carries 2 marks.		Marks
1		What are the seven wastes in Lean Management?	(2)
2		What does TPM stand for?	(2)
3		What is the A3 problem-solving approach and how is it utilized in Lean management?	(2)
4		What is Value Stream Mapping (VSM) and why is it used in process improvement?	(2)
5		What are the key principles of Lean Management?	(2)

PART B			
	Answer any FOUR questions from this section. Each question carries 4 marks.		
6		How has Lean Management evolved over time, and what factors have influenced its development? .	(4)
7		Explain the concept of Overall Equipment Effectiveness (OEE) in Lean Manufacturing.	(4)
8		How would you implement a Kanban system in a manufacturing environment to improve workflow?	(4)
9		Evaluate the effectiveness of implementing Lean principles in a service industry compared to a manufacturing setting.	(4)
10		What is Total Productive Maintenance (TPM) and how does it aim to improve equipment reliability and productivity?	(4)
11		How would you prepare a project plan for implementing Lean principles in a manufacturing environment?	(4)

PART C			
	Answer any THREE questions from this section. Each question carries 8 marks		
12		Evaluate the effectiveness of Lean Management in reducing waste and improving productivity compared to traditional management approaches.	(8)
13		Evaluate the impact of implementing Seiri, Seiton, Seiso, Seiketsu, and Shitsuke on productivity and waste reduction.	(8)

14		Critique the strengths and weaknesses of the DMAIC methodology in Lean Six Sigma.	(8)
15		Critically assess the effectiveness of Value Stream Mapping in identifying process inefficiencies and opportunities for improvement.	(8)
16		Compare and contrast different methodologies for continuous improvement within Lean Management.	(8)
		PART D (Compulsory Question, 10 marks)	
17		Company XYZ, a manufacturing firm, has been experiencing inefficiencies in its production processes leading to delays in delivery, increased costs, and decreased customer satisfaction. As a consultant specializing in lean management, you've been hired to analyze their operations and recommend improvements. Based on your expertise in Value Stream Mapping (VSM), you decide to conduct a Current State Exercise on Value Stream Mapping to identify areas of waste and inefficiency. 1. Briefly outline the steps you would take to conduct a Current State Exercise on Value Stream Mapping for Company XYZ. (3 marks) 2. During your analysis, you discover several instances of waste in their production processes. Identify and explain at least four of the eight wastes of Lean that are evident in Company XYZ's operations. (4 marks) 3. Upon completing the Current State Exercise, you realize that Company XYZ's production processes have a considerable gap between Takt Time, Cycle Time, Lead Time, and Throughput Time. Explain the significance of each of these metrics and how they contribute to operational efficiency. (3 marks)	(10)

SET 1

Scheme of Valuation/Answer Key
(Scheme of evaluation (marks in brackets) and answers of problems/key)

UNIVERSITY OF CALICUT
……………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EOM 04

Course Name: LEAN MANAGEMENT

Max. Marks: 60			Duration: 3 Hours

<div align="center">PART A</div>

		Answer all questions, each carries 2 marks.	Marks
1		- 1 mark for listing all seven wastes. - 1 mark for correctly identifying each waste.	(2)
2		- 1 mark for correctly stating "Total Productive Maintenance." - 1 mark for providing the accurate expansion of the abbreviation.	(2)
3		- 1 mark for explaining the A3 problem-solving approach. - 1 mark for describing its utilization in Lean management.	(2)
4		- 1 mark for defining Value Stream Mapping. - 1 mark for explaining its purpose in process improvement	(2)
5		- 1 mark for listing key principles. - 1 mark for providing a brief explanation or description of each principle.	(2)

<div align="center">PART B</div>

<div align="center"><i>Answer any FOUR questions from this section. Each question carries 4 marks.</i></div>

6		- 1 mark for explaining the evolution of Lean Management. - 1 mark for identifying key influencing factors. - 2 marks for providing detailed analysis or examples.	(4)
7		- 1 mark for defining OEE. - 1 mark for explaining its significance in Lean Manufacturing. - 2 marks for providing examples or discussing its application.	(4)
8		- 1 mark for describing the Kanban system. - 1 mark for explaining its role in improving workflow. - 2 marks for outlining the implementation process with relevant details.	(4)
9		- 1 mark for discussing Lean principles in a service industry. - 1 mark for discussing Lean principles in a manufacturing setting. - 2 marks for providing a comparative evaluation with examples or evidence.	(4)
10		- 1 mark for defining TPM. - 1 mark for explaining its objective in improving equipment reliability and productivity. - 2 marks for providing detailed insights into TPM implementation and its	(4)

		impact.	
11		a) Understanding of Lean Principles and Manufacturing Environment: 1 mark - Demonstrates knowledge of Lean principles and their applicability in a manufacturing setting. b) Development of a Comprehensive Project Plan: 2 marks - Identifies key areas for improvement. - Outlines specific steps, timelines, and resources required for implementation. c) Consideration of Potential Challenges and Mitigation Strategies: 1 mark - Addresses potential obstacles to implementation. - Offers strategies for overcoming challenges and ensuring successful execution.	(4)
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		- 2 marks for discussing the effectiveness of Lean Management in waste reduction. - 2 marks for discussing the effectiveness of Lean Management in improving productivity. - 4 marks for comparing Lean Management with traditional approaches with evidence and critical analysis.	(8)
13		- 2 marks for explaining each of the 5S principles. - 4 marks for evaluating their impact on productivity and waste reduction with examples or case studies. - 2 marks for providing a comprehensive assessment.	(8)
14		- 2 marks for identifying and explaining the strengths of DMAIC. - 2 marks for identifying and explaining the weaknesses of DMAIC. - 4 marks for providing a critical analysis supported by examples or case studies.	(8)
15		- 2 marks for discussing the effectiveness of VSM in identifying process inefficiencies. - 2 marks for discussing the effectiveness of VSM in identifying opportunities for improvement. - 4 marks for providing a critical assessment with examples or case studies.	(8)
16		- 2 marks for discussing different methodologies for continuous improvement. - 2 marks for comparing these methodologies. - 4 marks for providing a detailed analysis of their strengths, weaknesses, and suitability in various contexts.	(8)
PART D (Compulsory Question)			
17		- 1 mark for listing the steps. - 2 marks for providing a clear and concise explanation of each step. **During your analysis, you discover several instances of waste in their production processes. Identify and explain at least four of**	(10)

the eight wastes of Lean that are evident in Company XYZ's operations. (4 marks)
   - 1 mark for identifying each waste.
   - 1 mark for explaining how each waste is evident in Company XYZ's operations.
   - 2 marks for providing detailed explanations with examples.

   Upon completing the Current State Exercise, you realize that Company XYZ's production processes have a considerable gap between Takt Time, Cycle Time, Lead Time, and Throughput Time. Explain the significance of each of these metrics and how they contribute to operational efficiency. (3 marks)
   - 1 mark for explaining the significance of Takt Time.
   - 1 mark for explaining the significance of Cycle Time.
   - 1 mark for explaining the significance of Lead Time and Throughput Time.
   - 1 mark for demonstrating how each metric contributes to operational efficiency.

SET 1

UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EOM 05
Course Name: OPERATIONS STRATEGY

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Explain the concept of competitive leverage in operations strategy.	(2)
2		What is the significance of aligning operations strategy with business strategy?	(2)
3		Define capacity planning and its importance in operations strategy implementation.	(2)
4		Discuss the role of ethical responsibility in operations excellence.	(2)
5		Identify two key performance metrics used in evaluating operations strategy.	(2)

PART B

		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Describe the process of facility location selection and its impact on operations strategy.	(4)
7		How does process design and development contribute to achieving competitive advantage?	(4)
8		Explain the concept of supply chain architecture and its importance in managing firm and supply chains.	(4)
9		Discuss the role of the Chief Operations Officer (COO) in enabling the implementation of operations strategy.	(4)
10		Analyze the implications of capacity flexibility on cost and other trade-offs.	(4)
11		Detail the strategic importance of IT implementation and process technology in modern operations management.	(4)

PART C

		Answer any THREE questions from this section. Each question carries 8 marks	
12		Evaluate the impact of global supply chain trends on operations strategy and how companies can adapt to these trends.	(8)
13		Discuss the significance of strategic partnerships in the supply chain and provide an example with a case study.	(8)
14		Explain how outsourcing and subcontracting decisions are made within the context of enabling operations strategy implementation.	(8)
15		Assess the role of risk management in maintaining business resilience and staying competitive in the face of challenges.	(8)
16		Describe how lean concepts and innovation contribute to the agility and sustainability of operations in contemporary business environments.	(8)

PART D (Compulsory Question, 10 marks)

17		TechSolutions Inc., a company specializing in the development of medical devices, is facing challenges in responding quickly to market changes and customer demands. The management team recognizes the need to improve their decision-making process, especially in areas such as product development, inventory management, and supply chain operations. They believe that their current decision support systems (DSS) are outdated and not integrated well enough	(10)

to provide the comprehensive insights needed for strategic planning and operational adjustments. TechSolutions Inc. has a diverse product range, operates in a highly regulated industry, and has a global supply chain, making their operations complex and data-intensive. The company aims to leverage advanced DSS to gain competitive advantage by enhancing product innovation, optimizing inventory levels, and ensuring a responsive supply chain. As the Operations Manager, you are tasked with overseeing the upgrade and integration of the new DSS.

Identify the key features and capabilities that the new DSS should have to address TechSolutions Inc.'s operational challenges. Consider aspects such as data integration, analytics, and user accessibility.

Explain how the implementation of a modern DSS can improve decision-making in product development, inventory management, and supply chain operations at TechSolutions Inc. Provide examples of specific decisions that could be impacted.

Outline a strategic plan for the adoption and integration of the new DSS within TechSolutions Inc. Include considerations for training, data migration, and ensuring system scalability to support future growth and innovation.

SET 1		
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)		
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR		
Course Code: BUS 3EOM 05		
Course Name: OPERATIONS STRATEGY		

Max. Marks: 60		Duration: 3 Hours

PART A		
Answer all questions, each carries 2 marks.		Marks
1	Competitive leverage defined as using operations to gain a competitive edge. (1 mark) Examples of leveraging efficiency, quality, or innovation in operations. (1 mark)	(2)
2	Ensures cohesive goals across the organization. (1 mark) Enhances competitive positioning and market responsiveness. (1 mark)	(2)
3	Capacity planning ensures resources match demand. (1 mark) Critical for balancing cost, efficiency, and customer satisfaction. (1 mark)	(2)
4	Ethical responsibility integral to sustainable operations. (1 mark) Affects brand image, customer trust, and long-term profitability. (1 mark)	(2)
5	Examples: Operational efficiency (e.g., throughput rate) and Quality metrics (e.g., defect rates). (2 marks)	(2)

PART B		
Answer any FOUR questions from this section. Each question carries 4 marks.		
6	Factors in selection: Cost, access to markets, logistics. (2 marks) Direct impact on operational costs, efficiency, and service levels. (2 marks)	(4)
7	Streamlines operations for efficiency and quality. (2 marks)	(4)

		Facilitates innovation and faster market response. (2 marks)	
8		Structure of supply chain operations. (2 marks)	(4)
		Enables strategic alignment, efficiency, and adaptability. (2 marks)	
9		Leadership in strategy execution. (2 marks)	(4)
		Balances strategic goals with operational realities. (2 marks)	
10		Balances responsiveness with efficiency. (2 marks)	(4)
		Trade-offs include cost variability and investment in flexibility. (2 marks)	
11		Enhances data-driven decision-making. (2 marks)	(4)
		Critical for operational efficiency, innovation, and scalability. (2 marks)	

PART C
Answer any THREE questions from this section. Each question carries 8 marks

12		Trends like globalization, digitization, sustainability. (4 marks)	(8)
		Adaptation through agile practices, technology, and strategic planning. (4 marks)	
13		Enhances competitiveness and innovation. (4 marks)	(8)
		Example: Collaboration for sustainable sourcing or technology integration. (4 marks)	
14		Based on cost, expertise, and focus on core activities. (4 marks)	(8)
		Considerations include quality control, risk management, and strategic alignment. (4 marks)	
15		Identifies, assesses, and mitigates operational risks. (4 marks)	(8)
		Ensures continuity, adaptability, and competitive edge. (4 marks)	
16		Lean concepts reduce waste and increase efficiency. (4 marks)	(8)
		Innovation drives adaptability, market responsiveness, and sustainable practices. (4 marks)	

PART D (Compulsory Question)

17		Identify the key features and capabilities that the new DSS should have to address TechSolutions Inc.'s operational challenges.	(10)

| | | Advanced analytics for predictive insights. (1 marks)

Real-time data integration across operations. (1 marks)

Explain how the implementation of a modern DSS can improve decision-making in product development, inventory management, and supply chain operations at TechSolutions Inc.

Enables data-driven strategies for market responsiveness. (2 marks)

Supports effective inventory and supply chain optimization. (2 marks)

Outline a strategic plan for the adoption and integration of the new DSS within TechSolutions Inc.

Steps for DSS adoption and integration. (2 marks)

Training programs for user competency. (1 marks)

Scalability planning for future growth. (1 marks) | |

SET 1

UNIVERSITY OF CALICUT
……………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EOM 01

Course Name: Quality Management

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		What are the significant stages of the evolution of quality concepts in manufacturing?	(2)
2		Detail the components of total quality	(2)
3		What is 'customer focus' in determining quality dimensions?	(2)
4		Explain the different types of costs associated with quality	(2)
5		What are the definitions of quality from the perspectives of Crosby and Juran.?	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Explain the difference between product quality and service quality, highlighting key dimensions of each.	(4)
7		Highlight the contributions of W. Edwards Deming to the field of quality management and their relevance today.	(4)
8		Describe the Japanese 5S principles and illustrate their application in improving workplace organization.	(4)
9		Discuss the role and structure of Quality Circles in fostering a culture of continuous improvement.	(4)
10		Explain the concept of the 8D problem-solving methodology and its effectiveness, supported by an illustrative case study.	(4)
11		Outline the principles of the Six Sigma methodology and its benefits to organizational process capability.	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Elaborate on the use and construction of control charts in Statistical Process Control (SPC) and their significance in quality assurance.	(8)
13		Define process capability and describe how it is measured with an example	(8)
14		Discuss the importance of reliability in quality management, focusing on series and parallel configurations and their impact on product longevity.	(8)

15		Evaluate the application and impact of Quality Function Deployment (QFD) in aligning product design with customer requirements, supported by a case example.	(8)
16		Analyze the role of traditional quality tools in diagnosing and addressing quality issues within manufacturing processes.	(8)
		PART D (Compulsory Question, 10 marks)	

17		ApexTech Solutions, a manufacturer known for innovative control system devices for industrial applications, is currently facing challenges highlighted by recent customer feedback, impacting product quality and user satisfaction. These issues include hardware reliability problems, with devices failing more frequently than expected, leading to increased downtime and maintenance costs. Additionally, users are experiencing difficulties integrating the devices' software with existing systems, which affects operational efficiency. The user interface of these devices has also been criticized for being non-intuitive, requiring extensive training for effective operation. Moreover, there is a noted lack of flexibility for customization, restricting the devices' applicability across various industrial settings. Compounding these issues is the slow response time and inadequate problem resolution provided by the customer support team, further contributing to user dissatisfaction.
		
		    i. Identify the likely sources of quality inconsistencies and user dissatisfaction in ApexTech Solutions' products. (3 marks)
		    ii. Recommend specific quality management practices and tools, such as Six Sigma and FMEA, that ApexTech Solutions can adopt to enhance product quality and user experience. (4 marks)
		    iii. Propose a plan for integrating a continuous quality improvement framework, considering methodologies like TQM or Lean Six Sigma, to sustain quality enhancement efforts. (3 marks)
			(10)

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT **………………. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR**
Course Code: BUS 4EOM 01
Course Name: Quality Management

Max. Marks: 60		Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		● Craftsmanship to Industrial Revolution, Quality Control, Quality Assurance, and Total Quality Management. (2 marks)	(2)
2		● Customer focus, continuous improvement, employee involvement, and process approach. (2 marks)	(2)
3		● Understanding and meeting customer needs and expectations to enhance satisfaction and loyalty. (2 marks)	(2)
4		● Prevention costs, appraisal costs, internal failure costs, and external failure costs. (2 marks)	(2)
5		● Crosby: "Quality is conformance to requirements." Juran: "Quality is fitness for use." (2 marks)	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		● Product quality: Tangible attributes like durability and functionality. (2 marks) ● Service quality: Intangible attributes like responsiveness and reliability. (2 marks	(4)
7		● Introduction of the PDCA cycle and 14 points for management. (2 marks)	(4)

		● Emphasis on system-wide changes and statistical control of processes. (2 marks)	
8		● Principles: Sort, Set in order, Shine, Standardize, Sustain. (2 marks) ● Application: Enhancing efficiency, safety, and productivity in workplaces. (2 marks)	(4)
9		● Employee participation in problem-solving and process improvements. (2 marks) ● Structure: Small groups led by a facilitator, focusing on specific quality issues. (2 marks)	(4)
10		● Steps: Problem identification to corrective actions and prevention. (2 marks) ● Effectiveness: Case study illustrating resolution of a manufacturing defect. (2 marks)	(4)
11		● Focus on defect reduction and process variability improvement. (2 marks) ● Benefits: Enhanced product quality, customer satisfaction, and operational efficiency. (2 marks)	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		● Monitoring process stability and detecting variations using X-bar and R charts. With diagrams (4 marks) ● Significance: Early detection of process issues, facilitating timely interventions. (4 marks)	(8)
13		● Measurement of a process's ability to produce output within specified limits. (4 marks) ● Example: Calculation of Cp and Cpk values to assess process performance in manufacturing. (4 marks)	(8)
14		● Reliability's role in ensuring consistent product performance and customer trust. (4 marks) ● Series and parallel configurations: Impact on overall system reliability and strategies for improvement. (4 marks)	(8)
15		● Methodology for translating customer needs into technical specifications. (4 marks) ● Case study: Application of QFD in automotive design leading to significant customer satisfaction improvements. (4 marks)	(8)
16		● Tools like fishbone diagrams, Pareto charts, and flowcharts in identifying root causes of quality problems. (4 marks) ● Their application in formulating effective solutions and process optimizations. (4 marks)	(8)

PART D (Compulsory Question)

17		**Challenges faced by ApexTech Solutions and strategies**	(10)

for improvement.

i. **Likely sources of quality inconsistencies and user dissatisfaction in ApexTech Solutions' products.** (3 marks) Design flaws, inadequate testing, poor material quality, lack of user-centered design, ineffective customer service.

ii. **Recommend specific quality management practices and tools.** (4 marks) - Implementing Six Sigma for process optimization, FMEA for preemptive identification of potential failures, and adopting user-centered design principles.

iii. **Plan for integrating a continuous quality improvement framework.** (3 marks) - Adopting TQM principles for overarching quality focus, applying Lean Six Sigma to reduce waste, and establishing a feedback loop with customers for continuous product improvement.

SET 1
UNIVERSITY OF CALICUT **……………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR**
Course Code: BUS 4EOM 02
Course Name: Project Management

Max. Marks: 60		Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		What do you mean by Project appraisal?	(2)
2		Explain the concept of project feasibility & its importance.	(2)
3		What is crash time of an activity?	(2)
4		Write the difference between PERT & CPM?	(2)
5		Name common tools used in the Scrum environment.	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Compare and contrast the philosophy of Agile with traditional project management approaches.	(4)
7		Analyze a project network diagram to identify critical paths and potential bottlenecks. How can project managers optimize project schedules to minimize risks and delays?	(4)
8		Explain the methodology for project evaluation in detail.	(4)

9		Explain the concept of Product Backlog Refinement in Scrum and describe its importance in ensuring project success.	(4)
10		Elaborate on how Agile philosophy fosters adaptability and flexibility in project management.	(4)
11		How can project managers address stress and promote well-being among team members during project execution?	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		In a hypothetical project scenario, how would you allocate roles within a Scrum team to maximize efficiency and collaboration?	(8)
13		Assess the strengths and limitations of using Net Present Value (NPV), Internal Rate of Return (IRR), and Profitability Index (PI) as financial metrics for project evaluation. How do these metrics complement each other in decision-making?	(8)
14		Explain the key values outlined in the Agile Manifesto? How do these values guide the Agile approach to project management?	(8)
15		Identify common challenges that organizations may face during the transition to Agile methodologies? What strategies could help the organizations to overcome these challenges and pitfalls during Agile transition?	(8)
16		When managing conflicts among project stakeholders, what are the participative management techniques that can be employed to foster consensus and resolution?	(8)

PART D (Compulsory Question, 10 marks)

17		Mr. Raghu is from a middleclass family and his father owns a grocery shop in his village. After graduating in science, he finalized to start a small sized soap manufacturing unit. His financial capacity was not so sound. The machinery supplier quoted a price of Rs. 7 lakhs for the plant. Though the plant is being locally manufactured, it has already proved its technical capability.	(10)
		Raghu was confident he could sell his products at competitive prices in local area within a radius of 5 km in which there are many villages/towns. He knew that branded soaps from bigger companies are in the market. But still he was confident that he could compete on the price front and could take a market share. He mobilized 3 lakhs from his savings and availed a loan of 5 lakhs from his close friends and relatives and set up the unit. He promised his creditors 15% interest per annum which was 3% higher than the prevailing bank rate. He did not approach any bank as he was afraid of procedural delays.	
		Prepare a project proposal for Mr. Raghu.	

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT **……………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR**
Course Code: BUS 4EOM 02
Course Name: Project Management

Max. Marks: 60			Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		● Definition: Systematic assessment of project viability, risks, and benefits. 1 mark ● Importance: Informs decision-making, minimizes risks, ensures alignment with goals. 1 mark	(2)
2		● Concept: Assessment of technical, financial, and operational viability. ● Importance: Guides decision-making, identifies risks, ensures project success.	(2)
3		● Definition: Shortest possible duration with additional resources for activity completion. 1 mark ● Significance: Helps reduce project duration, meet deadlines, optimize resource use. 1 mark	(2)
4		● Key Difference: PERT is probabilistic, while CPM is deterministic. 1 mark ● May include differences in approach to time estimation or project scheduling. 1 mark	(2)

| 5 | | ● Examples: Jira, Trello, Rally. 1 mark | (2) |
| | | ● Usage: Backlog management, sprint planning, task tracking. 1 mark | |

| | PART B | |
| | **Answer any FOUR questions from this section. Each question carries 4 marks.** | |

6		● Comparison of Agile and Traditional Approaches: 2 marks	(4)
		Discuss key differences in approach, such as flexibility, customer collaboration, iterative development (Agile), versus rigidity, sequential phases, and formal documentation (Traditional).	
		● Contrast of Agile and Traditional Approaches: 2 marks	
		Highlight similarities, such as the focus on delivering value, while also emphasizing the distinctive features that set Agile apart, such as adaptability to change and customer satisfaction.	

7		● Analysis of Critical Paths and Bottlenecks: 2 marks	(4)
		Identify critical paths accurately and discusses potential bottlenecks in the project network diagram.	
		● Optimization Strategies: 2 marks	
		Provide effective strategies to optimize project schedules, such as resource levelling, task prioritization, or utilizing critical path analysis tools to identify and mitigate risks and delays.	

| 8 | | ● Describe specific evaluation techniques, such as cost-benefit analysis, SWOT analysis, or balanced scorecards 2 marks | (4) |
| | | ● Explain how they are applied to evaluate project performance and outcomes. 2 marks | |

9		● Explanation of Product Backlog Refinement: 2 marks	(4)
		Define Product Backlog Refinement as the ongoing process of prioritizing, clarifying, and updating items in the product backlog to ensure its readiness for Sprint Planning.	
		● Importance in Ensuring Project Success: 2 marks	
		Explain how Product Backlog Refinement enhances project success by ensuring alignment with stakeholder needs, maintaining a clear vision, and facilitating efficient Sprint Planning and execution.	

10		● Elaboration on Agile Philosophy: 2 marks	(4)
		Expand on Agile principles such as customer collaboration, responding to change, and delivering working solutions iteratively.	
		● Fostering Adaptability and Flexibility: 2 marks	
		Explain how Agile methodologies like Scrum and Kanban promote adaptability and flexibility through iterative development, frequent feedback loops, and embracing change throughout the project lifecycle.	

11		● Strategies to Address Stress: 2 marks	(4)
		Provide effective strategies for identifying and managing stressors, such as workload distribution, fostering open communication, and implementing stress-relief activities.	
		● Promotion of Team Well-being: 2 marks	
		Discuss methods for promoting team well-being, such as encouraging work-life balance, recognizing achievements, and fostering a supportive team culture that prioritizes	

		mental and physical health.	
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		● Allocation of Roles: 4 marks Provide a clear and effective allocation of roles within a Scrum team, considering roles such as Product Owner, Scrum Master, and Development Team members, and justifying their responsibilities and interactions. ● Maximizing Efficiency and Collaboration: 4 marks Explain how the allocated roles contribute to maximizing efficiency and collaboration within the Scrum team, emphasizing principles such as self-organization, cross-functionality, and shared accountability.	(8)
13		● Assessment of Financial Metrics: 4 marks Evaluate the strengths and limitations of NPV, IRR, and PI accurately, discussing factors such as ease of calculation, sensitivity to discount rates, and consideration of cash flows over time. ● Complementarity in Decision-making: 4 marks Explain how these metrics complement each other in decision-making, such as NPV providing an absolute measure of project value, IRR indicating project profitability, and PI allowing for comparison of projects with different scales and durations.	(8)
14		● Explanation of Agile Manifesto Values: 4 marks Clearly defines the four key values of the Agile Manifesto: Individuals and Interactions over Processes and Tools, Working Software over Comprehensive Documentation, Customer Collaboration over Contract Negotiation, and Responding to Change over Following a Plan. ● Guidance in Agile Project Management: 4 marks Discuss how these values guide Agile project management practices, such as prioritizing customer satisfaction, promoting flexibility and adaptability, fostering collaboration among team members, and embracing change throughout the project lifecycle.	(8)
15		● Identification of Challenges: 4 marks Identify common challenges organizations may face during the transition to Agile methodologies, such as resistance to change, cultural barriers, lack of understanding or experience with Agile practices. ● Strategies for Overcoming Challenges: 4 marks Provide effective strategies for overcoming these challenges, such as comprehensive training and education, leadership support and alignment, gradual adoption and iterative improvement, fostering a culture of collaboration and experimentation, and leveraging external expertise or Agile coaches.	(8)
16		● Employment of Participative Management Techniques: 4 marks Describe specific participative management techniques, such as active listening, brainstorming, consensus building, and conflict resolution strategies, and explains how they can be applied to manage conflicts among project stakeholders effectively. ● Fostering Consensus and Resolution: 4 marks Discuss how these techniques foster consensus and	(8)

		resolution among stakeholders by promoting open communication, mutual understanding, and collaborative problem-solving, ultimately leading to constructive outcomes and strengthened relationships within the project team.		
PART D (Compulsory Question)
17		● Introduction and Project Description Market Analysis and Competitive Advantage Financial Plan and Sales Projection 5 marks ● Risk Analysis and Mitigation Strategies Operational Plan and Marketing Strategy Projected Returns and Conclusion 5 marks		(10)

SET 1

UNIVERSITY OF CALICUT ……………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EOM 03
Course Name: Product and Process Design and Management

Max. Marks: 60		Duration: 3 Hours

PART A		
Answer all questions, each carries 2 marks.		Marks
1	Describe the importance of opportunity identification and market research in the early stages of product development.	(2)
2	What is value proposition design, and how does it relate to meeting customer needs?	(2)
3	Explain the concept of design thinking and its significance in the product design process.	(2)
4	Define process flow diagrams and their role in process design.	(2)
5	Outline the key elements of a go-to-market strategy for a new pro	(2)

PART B		
Answer any FOUR questions from this section. Each question carries 4 marks.		
6	How does stakeholder analysis influence product and process development outcomes?	(4)
7	Discuss the role of empathy mapping in understanding user needs and enhancing product design.	(4)
8	Describe the benefits of using BPMN (Business Process Model and Notation) for process visualization and design.	(4)
9	Explain the concept of concurrent engineering and its advantages over traditional product development methods.	(4)
10	Detail the process of developing and utilizing high/low-fidelity prototypes in the product design process.	(4)
11	Analyze the importance of product road mapping in managing a product's lifecycle and strategic direction.	(4)

PART C		
Answer any THREE questions from this section. Each question carries 8 marks		
12	Evaluate the impact of iterative design and the MVP (Minimum Viable Product) approach on the success of product development projects.	(8)
13	Discuss the application of QFD (Quality Function Deployment) in aligning product designs with customer requirements and expectations.	(8)
14	Illustrate how process value mapping can be utilized to enhance efficiency and value in service design, providing examples of potential improvements	(8)
15	Critically assess the challenges and strategies of product portfolio management in maintaining competitive advantage in the market.	(8)
16	Describe how lean methodology and Six Sigma contribute to innovation and the future outlook of process design.	(8)

PART D (Compulsory Question, 10 marks)

17	EcoTech Innovations, a startup specializing in eco-friendly home appliances, is planning to launch a new line of energy-efficient air purifiers. The company aims to differentiate its products through innovative design, superior air purification technology, and smart features that cater to health-conscious consumers. As part of the product development team, you are involved in designing, testing, and preparing the product for market entry. 1. Identify the key steps in the product design process that EcoTech Innovations should follow to ensure the air purifier meets market needs and expectations. Consider aspects such as user-centered design and prototype testing. (3 marks) 2. Outline a process design strategy that incorporates lean methodology and continuous improvement to optimize the manufacturing process of the air purifiers. (3 marks) 3. Develop a comprehensive go-to-market plan for the new air purifier line, highlighting product positioning, target market segments, and key marketing strategies. (4 marks)	(10)

UNIVERSITY OF CALICUT
……………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EOM 03

Course Name: Product and Process Design and Management

Max. Marks: 60		Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		● Identifies unmet needs and emerging trends, providing a foundation for innovative product ideas. (1 mark) ● Informs product feasibility, market size estimation, and competitive analysis, reducing investment risks. (1 mark)	(2)
2		● Clarifies how the product solves problems or improves customer situations, highlighting unique benefits. (1 mark) ● Ensures product development aligns with customer expectations, enhancing market fit and adoption rates. (1 mark)	(2)
3		● Promotes a user-centric approach to problem-solving, encouraging creativity and innovation. (1 mark) ● Supports iterative development, allowing for rapid prototyping, testing, and refinement based on real user feedback. (1 mark)	(2)
4		● Provides a visual representation of the sequence and interaction of processes, aiding in clarity and comprehension. (1 mark) ● Facilitates identification of process inefficiencies and optimization opportunities, leading to streamlined operations. (1 mark)	(2)
5		● Detailed market analysis and segmentation to identify target customers. (1 mark) ● Strategic marketing mix (product, price, place, promotion) to effectively reach and engage the target market. (1 mark)	(2)

		PART B	
	Answer any FOUR questions from this section. Each question carries 4 marks.		
6		● Ensures alignment of product features and process designs with the needs of users, customers, employees, and other stakeholders. (2 marks) ● Facilitates early identification of potential resistance or support, guiding strategic planning and communication efforts. (2 marks)	(4)

7		● Deepens understanding of the user's experience, capturing emotional and motivational dimensions that drive design decisions. (2 marks) ● Informs the creation of more personalized and effective solutions, improving user satisfaction and loyalty. (2 marks)	(4)
8		● Enhances cross-functional communication and collaboration through a standardized visual language. (2 marks) ● Enables effective analysis and redesign of processes for efficiency, scalability, and adaptability to change. (2 marks)	(4)
9		● Facilitates simultaneous product design and development activities, significantly reducing development time and costs. (2 marks) ● Enhances product quality and performance by integrating cross-disciplinary insights and expertise early in the development process. (2 marks)	(4)
10		● Low-fidelity prototypes (e.g., sketches, paper models) are used for quick conceptual exploration and feedback. (2 marks) ● High-fidelity prototypes (e.g., working models, digital simulations) provide a realistic experience for detailed testing and validation. (2 marks)	(4)
11		● Serves as a strategic blueprint, outlining the development timeline, feature releases, and market entry points. (2 marks) ● Facilitates alignment among internal teams and stakeholders, ensuring coherent progress towards long-term goals. (2 marks)	(4)
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		● Allows for flexible adaptation to user feedback and market changes, ensuring the product remains relevant and competitive. (4 marks) ● Minimizes upfront investment and risk by validating product concepts and market demand early in the development cycle. (4 marks)	(8)
13		● Systematically translates customer desires into design specifications and technical requirements, ensuring customer-driven design. (4 marks) ● Facilitates cross-functional team collaboration, focusing efforts on critical quality attributes that enhance customer satisfaction. (4 marks)	(8)
14			(8)

		• Maps the customer journey to identify touchpoints that add value or create frustration, guiding targeted improvements. (4 marks) • Encourages a holistic view of the service process, leading to innovative solutions that elevate the overall customer experience. (4 marks)	
15		• Navigates product cannibalization, market saturation, and portfolio complexity, balancing resource allocation and strategic focus. (4 marks) • Employs strategic analysis tools (e.g., BCG matrix, SWOT analysis) to optimize portfolio composition for growth and profitability. (4 marks)	(8)
16		• Lean principles drive waste elimination and efficiency, fostering a culture of continuous improvement and customer value focus. (4 marks) • Six Sigma methodologies apply data-driven decision-making to reduce variability and defects, improving quality and operational performance. (4 marks)	(8)
		PART D (Compulsory Question)	
17		**Key steps in the product design process for EcoTech Innovations' air purifiers.** Market and user research to capture detailed insights into health concerns, preferences, and environmental awareness. (1 mark) Iterative prototyping and user testing to refine usability, aesthetics, and functionality, ensuring alignment with customer expectations. (1 mark) Final design validation through user feedback and compliance testing, confirming market readiness and regulatory adherence. (1 mark) **Process design strategy incorporating lean methodology for air purifiers.** Analysis of the manufacturing process to eliminate non-value-added activities, optimizing resource use and reducing lead times. (1 mark) Implementation of lean tools (e.g., 5S, Kaizen) for continuous process improvement, enhancing quality and productivity. (1 mark) Development of a flexible manufacturing system to adapt to demand fluctuations and product variations, ensuring operational agility. (1 mark) **Go-to-market plan for EcoTech Innovations' new air purifier line.** Product positioning as a leader in eco-friendly, health-enhancing technology, leveraging unique selling points. (1 mark) Identification of target customer segments based on lifestyle, health consciousness, and environmental values, with tailored messaging	(10)

		strategies. (2 marks) Multi-channel marketing approach, incorporating digital advertising, influencer partnerships, and retail experiences to maximize reach and engagement. (1 mark)	

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UNIVERSITY OF CALICUT
……………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EOM 04

Course Name: International Logistics.

Max. Marks: 60			Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		What is meant by the term "supply pipeline" in global trade flows?	(2)
2		What are the typical constituents of an export sales contract?	(2)
3		What are some common trade-offs in international logistics?	(2)
4		What is the purpose of a Bill of Lading in the context of international transportation?	(2)
5		What factors contribute to international transport costs?	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Analyze the impact of globalization on international transport systems.	(4)
7		Compare and contrast different negotiating strategies used in international contract negotiations	(4)
8		How do considerations of speed and insurance affect international transportation decisions?	(4)
9		Why are safety and security important considerations in international transport?	(4)
10		How do transport economic indicators contribute to evaluating transportation systems?	(4)
11		Explain the purpose of a Bill of Lading in the context of international transportation?	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Compare and contrast the customs procedures and regulations of two different countries and their impact on global supply chain management.	(8)
13		Propose strategies for integrating diverse purchasing systems across global operations to streamline procurement processes and reduce costs.	(8)
14		How do process improvements, technology adoption, and supply chain collaboration contribute to cycle time reduction initiatives in international logistics?	(8)
15		Critically analyze the role of transportation services in promoting social and economic development in developing countries.	(8)
16		How do investments in transportation infrastructure and logistics systems contribute to GDP growth, employment generation, and regional integration?	(8)

PART D (Compulsory Question, 10 marks)

17		XYZ Corporation, a multinational company in the automotive industry, is experiencing challenges in its international logistics operations. As a logistics consultant, analyze the factors contributing to these challenges and propose strategies to optimize the company's international logistics operations. In your analysis, consider the impact of customs procedures, transportation modes, warehousing practices, and supply chain visibility on the company's overall logistics performance. Additionally, discuss how emerging trends and technologies can be leveraged to enhance efficiency and competitiveness in the global marketplace. Support your recommendations with relevant	(10)

		examples and industry best practices.	

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT ……………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 4EOM 04
Course Name: International Logistics.

Max. Marks: 60		Duration: 3 Hours

PART A			
	Answer all questions, each carries 2 marks.		Marks
1		Supply pipeline definition	(2)
2		Export sales contract constituents –name 4 constituents	(2)
3		Trade-offs in international logistics – list 4 trade-offs	(2)
4		Purpose of Bill of Lading – 1 relevant purpose	(2)
5		Factors contributing to international transport costs – 2 factors	(2)

PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		Impact of globalization on transport systems – mention 4 major points	(4)
7		Negotiating strategies in international contracts - 4 strategies	(4)
8		Considerations of speed and insurance in transportation – 2 points each	(4)
9		Importance of safety and security in international transport – 2 relevant points from safety and security	(4)
10		Contribution of transport economic indicators - 4 points	(4)
11		Purpose of Bill of Lading- 4 important purposes in the context of international transportation and trade	(4)

PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		Understanding of customs procedures and regulations in two different countries - 3 marks Comparison of key differences and similarities between the customs procedures and regulations of the two countries - 3 marks Analysis of the impact of these customs procedures and regulations on global supply chain management - 2 marks	(8)
13		Identification of challenges associated with diverse purchasing systems in global operations - 2 marks Proposal of strategies for integrating diverse purchasing systems - 4 marks Explanation of how these strategies streamline procurement processes and reduce costs - 2 marks	(8)
14		Explanation of process improvements in international logistics - 2 marks Discussion on the role of technology adoption in cycle time reduction - 3 marks Analysis of how supply chain collaboration contributes to cycle time reduction - 2 marks Integration of concepts to demonstrate overall understanding of cycle time	(8)

		reduction initiatives in international logistics - 1 mark	
15		Identification of the role of transportation services in promoting social development - 2 marks	(8)
		Identification of the role of transportation services in promoting economic development - 2 marks	
		Critical analysis of the combined impact of transportation services on social and economic development in developing countries - 4 marks	
16		Explanation of how investments in transportation infrastructure contribute to GDP growth - 2 marks	(8)
		Explanation of how investments in transportation infrastructure contribute to employment generation - 2 marks	
		Explanation of how investments in transportation infrastructure contribute to regional integration - 2 marks	
		Integration of concepts to demonstrate overall understanding of the contribution of investments in transportation infrastructure and logistics systems - 2 marks	
		PART D (Compulsory Question)	

17		1. Identification of Key Challenges in International Logistics Operations:
		
		   - Clear identification and analysis of the main challenges faced by XYZ Corporation in its international logistics operations - 3 marks
		
		2. Proposal of Strategies to Address Challenges:
		
		   - Concise proposal of strategies to optimize international logistics operations, addressing customs procedures, transportation modes, warehousing practices, and supply chain visibility - 4 marks
		
		3. Consideration of Impact and Effectiveness:
		
		   - Discussion on the potential impact of proposed strategies on XYZ Corporation's overall logistics performance and their effectiveness in mitigating the identified challenges - 3 marks
		
		This scheme ensures that students demonstrate their understanding of the challenges faced by XYZ Corporation, propose effective strategies to address these challenges, and evaluate the potential impact and effectiveness of their proposed solutions within the allocated marks.
			(10)

SET 1

UNIVERSITY OF CALICUT
……………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EOM 05

Course Name: World Class Manufacturing

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		What is meant by "world-class manufacturing"?	(2)
2		Define value-added manufacturing.	(2)
3		Define organizational learning.	(2)
4		What is the 5-S methodology?	(2)
5		What is agile manufacturing?	(2)

PART B

	Answer any FOUR questions from this section. Each question carries 4 marks.	
6	How do world-class organizations differ from their competitors in terms of their approach to performance measures?	(4)
7	dentify a bottleneck in a manufacturing process and propose strategies to alleviate it.	(4)
8	Explain the concepts of morale and teamwork and their importance in fostering a positive work environment.	(4)
9	Discuss how total employee involvement differs from traditional management approaches and provide examples of its implementation.	(4)
10	Define Poka Yoke and discuss its importance in error prevention during manufacturing processes.	(4)
11	Explain TOPP System and Ambite System.	(4)

PART C

	Answer any THREE questions from this section. Each question carries 8 marks	
12	Analyze how world-class organizations adapt to changing market dynamics and maintain their competitive edge over time.	(8)
13	Compare and contrast the Lean Thinking approach (Toyota Production System) with the Theory of Constraints in optimizing manufacturing operations.	(8)
14	Assess the benefits and challenges of using cross-functional teams in problem-solving and decision-making processes within organizations.	(8)
15	Explain how JIT production principles can help minimize inventory costs and improve product quality.	(8)
16	Explain how concurrent engineering practices can accelerate product development cycles and improve product quality.	(8)

PART D (Compulsory Question, 10 marks)

| 1 7 | | Company XYZ is a manufacturing firm specializing in the production of automotive components. Recently, the company has been experiencing quality issues, production delays, and increased costs in its manufacturing processes. As a consultant specializing in product and process design, you have been tasked with analyzing the situation and proposing solutions to address these challenges.

i. Identify the root causes of the quality issues, production delays, and increased costs faced by Company XYZ.

ii. Recommend appropriate product and process design strategies, including lean production, rapid prototyping, Poka Yoke, and JIT, to improve quality, efficiency, and cost-effectiveness in manufacturing operations.

iii. Utilize Six Sigma principles and methodologies, specifically the DMAIC (Define, Measure, Analyze, Improve, Control) or DMADV (Define, Measure, Analyze, Design, Verify) approach, to systematically address and resolve the identified quality issues. | (10) |

		SET 1	

Scheme of Valuation/Answer Key
(Scheme of evaluation (marks in brackets) and answers of problems/key)

UNIVERSITY OF CALICUT
……………… SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EOM 05

Course Name: World Class Manufacturing

Max. Marks: 60			Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Mar ks
1		Understanding of World-Class Manufacturing Accurate explanation provided.	(2)
2		Definition of Value-Added Manufacturing Clear definition of the concept.	(2)
3		Understanding of Organizational Learning Concise definition provided.	(2)
4		Explanation of the 5-S Methodology Clear description of the methodology.	(2)
5		Definition of Agile Manufacturing Accurate explanation provided.	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Understanding of Performance Measures in World-Class Organizations Clear explanation of differences in approach compared to competitors.	(4)
7		Identification and Proposal of Strategies for Alleviating Bottleneck Identification of bottleneck in a manufacturing process. 2 marks Proposal of feasible strategies to alleviate it. 2 marks	(4)
8		Explanation of Morale and Teamwork Concepts Clear explanation of morale and teamwork concepts.2 marks Insight into their importance in fostering a positive work environment. 2 marks	(4)
9		Discussion of Total Employee Involvement Explanation of how total employee involvement differs from traditional management approaches. 2 marks Providing examples of its implementation. 2marks	(4)
10		Definition and Importance of Poka Yoke	(4)

		Clear definition of Poka Yoke. 2 marks	
		Discussion on its importance in error prevention during manufacturing processes.2 marks	
1 1		Explanation of TOPP System and Ambite System	(4)
		Clear explanation of both systems. 2 marks	
		Insight into their significance in performance measurement. 2marks	

<table>
<tr><td colspan="4" align="center">PART C</td></tr>
<tr><td colspan="4" align="center">Answer any THREE questions from this section. Each question carries 8 marks</td></tr>
</table>

1 2		Analysis of Adaptation to Changing Market Dynamics	(8)
		Comprehensive analysis of how world-class organizations adapt to changing market dynamics. 4 marks	
		Insight into strategies employed to maintain competitive edge over time. 4 marks	
1 3		Comparison and Contrast of Lean Thinking and Theory of Constraints	(8)
		Clear comparison of Lean Thinking (Toyota Production System) and Theory of Constraints. 4marks	
		Insight into their respective approaches and effectiveness in optimizing manufacturing operations. 4marks	
1 4		Assessment of Benefits and Challenges of Cross-Functional Teams	(8)
		Thorough assessment of benefits and challenges associated with using cross-functional teams. 4 marks	
		Insight into their effectiveness in problem-solving and decision-making processes. 4 marks	
1 5		Explanation of JIT Production Principles	(8)
		Clear explanation of JIT production principles. 4 marks	
		Insight into how they minimize inventory costs and improve product quality. 4 marks	
1 6		Explanation of Concurrent Engineering Practices	(8)
		Clear explanation of concurrent engineering practices. 4 marks	
		Insight into their impact on product development cycles and product quality improvement. 4 marks	

<table>
<tr><td colspan="4" align="center">PART D (Compulsory Question)</td></tr>
</table>

1 7		i. Identification of Root Causes (3 marks):	(10)
		- Clear identification of quality issues, production delays, and increased costs.	
		- Understanding demonstrated in identifying underlying factors contributing to the challenges faced by Company XYZ.	
		ii. Recommendation of Product and Process Design Strategies (3 marks):	
		- Comprehensive recommendation of appropriate strategies such as lean production, rapid prototyping, Poka Yoke, and JIT.	
		- Solutions should be relevant and feasible for addressing quality, efficiency, and cost-effectiveness issues.	

		iii. Utilization of Six Sigma Principles (2 marks):	
		- Application of Six Sigma principles, employing the DMAIC or DMADV approach.	
		- Effective use of Six Sigma tools and methodologies in systematically addressing quality issues.	
		Overall Analysis and Recommendations (2 marks):	
		- Coherence and integration of recommendations with identified root causes.	
		- Clarity and structure in presenting the analysis and recommendations.	

SPECILIZATION-ANALYTICS

SET 1
UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EBA 01
Course Name: Python Programming for Data Science

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Explain the basic data types available in Python with examples.	(2)
2		Write Pythonic code to find the factorial of a number.	(2)
3		What are the different ways to get help in IPython?	(2)
4		How do you create data visualization in Python?	(2)
5		What is Data Wrangling in python	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Explain the Identifiers, Keywords, Statements and Expressions in Python programming language with examples.	(4)
7		Write Pythonic code to check if a given year is a leap year or not.	(4)
8		Write a Python program to convert uppercase letters to lowercase and vice versa.	(4)
9		What are some of the challenges involved in performing multimedia and graphic integration in Python?	(4)
10		How do you add a grid in Python?	(4)
11		What are the different ways to achieve parallelism in Python?	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Describe Arithmetic Operators, Comparison Operators, Logical Operators and Bitwise Operators in detail with examples.	(8)
13		Write a Python Program to reverse a number and also find the Sum of digits in the reversed number. Prompt the user for input.	(8)

14		What are the different ways to embed plots and other images in Python?	(8)
15		How can you use bar charts and histograms to compare the means and standard deviations of two different datasets?	(8)
16		How to calculate variance and range of a list in Python with and without built in function?	(8)
		PART D (Compulsory Question, 10 marks)	
17		Write a Python program to check the validity of a password given by the user. The Password should satisfy the following criteria: 1. Contain at least 1 letter between a and z 2. Contain at least 1 number between 0 and 9 3. Contain at least 1 letter between A and Z 4. Contain at least 1 character from $, #, @ 5. Minimum length of password: 6 6. Maximum length of password: 12	(10)

SET 1
Scheme of Valuation/Answer Key
(Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EBA 01
Course Name: Python Programming for Data Science

Max. Marks: 60			Duration: 3 Hours

PART A			
		Answer all questions, each carries 2 marks.	**Marks**
1		List any four datatypes in Python. ½ mark each.	(2)
2		Write a complete executable code for 2 marks. Partial coding with proper logic carries 1 mark.	(2)
3		List any two ways to get help in IPython	(2)
4		Describe data visualization in two or three sentences	(2)
5		Describe Data Wrangling in two or three sentences	(2)
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		Explain the Identifiers, Keywords, Statements and Expressions in Python programming language with examples. Carries 1 mark for each.	(4)
7		Write a complete executable code for 4 marks. Partial coding with proper logic carries 2 marks.	(4)
8		Write a complete executable code for 4 marks. Partial coding with proper logic carries 2 marks.	(4)
9		List and explain in brief about any 4 challenges involved in performing multimedia and graphic integration in Python.	(4)

10		Write a complete executable code for 4 marks. Partial coding with proper logic carries 2 marks.	(4)
11		Explain any two ways to achieve parallelism in Python.	(4)
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		Describe about each of the operators in detail carries 2 marks per each operator description with an example.	(8)
13		Write a complete executable code for 8 marks. Partial coding with proper logic carries 4 marks. Explaining the logical sequence is only 2 marks.	(8)
14		Write a complete executable code for 8 marks. Partial coding with proper logic carries 4 marks. Explaining the logical sequence is only 2 marks.	(8)
15		Write a complete executable code for 8 marks. Partial coding with proper logic carries 4 marks. Explaining the logical sequence only 2 marks.	(8)
16		Write a complete executable code for 8 marks. Partial coding with proper logic carries 4 marks. Explaining the logical sequence is only 2 marks.	(8)
PART D (Compulsory Question)			
17		Write a complete executable code for 10 marks. Partial coding with proper logic carries 5 marks. Explaining the logical sequence is only 3 marks.	(10)

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SET 1
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 3EBA 02
Course Name: Advanced statistical measures using SPSS

Max. Marks: 60		Duration: 3 Hours

<table>
<tr><td colspan="3" align="center">PART A</td></tr>
<tr><td colspan="2" align="center"><i>Answer all questions, each carries 2 marks.</i></td><td>Marks</td></tr>
<tr><td>1</td><td>Define the importance of data quality in statistical analysis.</td><td>(2)</td></tr>
<tr><td>2</td><td>Explain the difference between one-sample and two-sample t-tests.</td><td>(2)</td></tr>
<tr><td>3</td><td>What are the assumptions and limitations of linear regression?</td><td>(2)</td></tr>
<tr><td>4</td><td>Briefly discuss the difference between exploratory and confirmatory factor analysis.</td><td>(2)</td></tr>
<tr><td>5</td><td>How do you prepare data for data mining with SPSS?</td><td>(2)</td></tr>
<tr><td colspan="3" align="center">PART B</td></tr>
<tr><td colspan="3" align="center"><i>Answer any FOUR questions from this section. Each question carries 4 marks.</i></td></tr>
<tr><td>6</td><td>Discuss the significance of Chi-squared tests for independence and goodness-of-fit.</td><td>(4)</td></tr>
<tr><td>7</td><td>Explain the applications of logistic regression.</td><td>(4)</td></tr>
<tr><td>8</td><td>Discuss the concept of ANOVA and its applications with suitable examples.</td><td>(4)</td></tr>
<tr><td>9</td><td>How do you interpret factor loadings in factor analysis?</td><td>(4)</td></tr>
<tr><td>10</td><td>Explain the process of factor extraction in factor analysis using the principal component analysis (PCA) method.</td><td>(4)</td></tr>
<tr><td>11</td><td>Discuss the assumptions of logistic regression and how violations of these assumptions can affect the analysis.</td><td>(4)</td></tr>
<tr><td colspan="3" align="center">PART C</td></tr>
<tr><td colspan="3" align="center"><i>Answer any THREE questions from this section. Each question carries 8 marks</i></td></tr>
<tr><td>12</td><td>Perform a Mann-Whitney U test and explain its relevance in hypothesis testing.</td><td>(8)</td></tr>
</table>

13		Discuss the process of model building and interpretation in multiple regression analysis.	(8)
14		Explain the concept of association rule mining and provide examples of its applications.	(8)
15		Interpret the results of hierarchical clustering analysis using SPSS.	(8)
16		Conduct a one-way ANOVA analysis using the following data and interpret the results: Group 1: 25, 28, 30, 32, 35 Group 2: 20, 22, 25, 28, 30 Group 3: 15, 18, 20, 22, 25	(8)
		PART D (Compulsory Question, 10 marks)	
17		A company wants to analyze customer satisfaction based on various factors such as product quality, pricing, customer service, and delivery time. Design a survey questionnaire to collect relevant data. Identify appropriate statistical tests to analyze the collected data and provide recommendations to improve customer satisfaction.	(10)

		SET 1	

<table>
<tr><td colspan="4" align="center">Scheme of Valuation/Answer Key
(Scheme of evaluation (marks in brackets) and answers of problems/key)</td></tr>
<tr><td colspan="4" align="center">UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR</td></tr>
<tr><td colspan="4" align="center">Course Code: BUS 3EBA 02</td></tr>
<tr><td colspan="4" align="center">Course Name: Advanced statistical measures using SPSS</td></tr>
<tr><td colspan="2">Max. Marks: 60</td><td colspan="2" align="right">Duration: 3 Hours</td></tr>
<tr><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="4" align="center">PART A</td></tr>
<tr><td colspan="2"></td><td><i>Answer all questions, each carries 2 marks.</i></td><td>Marks</td></tr>
<tr><td>1</td><td></td><td>Define the importance of data quality in statistical analysis. (2)
● Stating the importance of data quality: 1 mark
● Explaining how data quality impacts statistical analysis: 1 mark</td><td>(2)</td></tr>
<tr><td>2</td><td></td><td>Explain the difference between one-sample and two-sample t-tests. (2)
● Defining one-sample and two-sample t-tests: 1 mark
● Explaining the difference between them: 1 mark</td><td>(2)</td></tr>
<tr><td>3</td><td></td><td>What are the assumptions and limitations of linear regression? (2)
● Listing assumptions: 1 mark
● Discussing limitations: 1 mark</td><td>(2)</td></tr>
<tr><td>4</td><td></td><td>Briefly discuss the difference between exploratory and confirmatory factor analysis. (2)
● Defining exploratory and confirmatory factor analysis: 1 mark
● Explaining the difference: 1 mark</td><td>(2)</td></tr>
<tr><td>5</td><td></td><td>How do you prepare data for data mining with SPSS? (2)
● Listing steps in data preparation: 1 mark
● Explaining the importance of data preparation in data mining: 1 mark</td><td>(2)</td></tr>
<tr><td colspan="4" align="center">PART B</td></tr>
<tr><td colspan="4"><i>Answer any FOUR questions from this section. Each question carries 4 marks.</i></td></tr>
<tr><td>6</td><td></td><td>Discuss the significance of Chi-squared tests for independence and goodness-of-fit. (4)
● Discussing the significance of Chi-squared tests: 2 marks
● Explaining applications for independence and goodness-of-fit: 2 marks</td><td>(4)</td></tr>
<tr><td>7</td><td></td><td>Explain the applications of logistic regression. (4)
● Listing applications: 2 marks
● Explaining the relevance in each application: 2 marks</td><td>(4)</td></tr>
</table>

8		Discuss the concept of ANOVA and its applications with suitable examples. (4)
		     ● Defining ANOVA: 2 marks
		     ● Providing examples and explaining its applications: 2 marks
			(4)

9		How do you interpret factor loadings in factor analysis? (4)
		
		     ● Explaining factor loadings: 2 marks
		
		     ● Discussing their interpretation: 2 marks
			(4)

10		Explain the process of factor extraction in factor analysis using the principal component analysis (PCA) method. (4)
		
		     ● Explanation of factor extraction process: 2 marks
		
		     ● Explanation of PCA method: 2 marks
			(4)

11		Discuss the assumptions of logistic regression and how violations of these assumptions can affect the analysis. (4)
		
		     ● Listing assumptions: 2 marks
		
		     ● Explaining the consequences of violating each assumption: 2 marks
			(4)

PART C			
Answer any THREE questions from this section. Each question carries 8 marks			

12		Perform a Mann-Whitney U test and explain its relevance in hypothesis testing. (8)
		     ● Performing the test: 4 marks
		     ● Explaining relevance in hypothesis testing: 4 marks
			(8)

13		Discuss the process of model building and interpretation in multiple regression analysis. (8)
		
		     ● Process of model building: 4 marks
		
		     ● Interpretation of results: 4 marks
			(8)

14		Explain the concept of association rule mining and provide examples of its applications. (8)
		
		     ● Explanation of association rule mining: 4 marks
		
		     ● Providing examples of applications: 4 marks
			(8)

15		Interpret the results of hierarchical clustering analysis using SPSS. (8)
		
		     ● Interpreting the results: 4 marks
		
		     ● Discussing implications or insights: 4 marks
			(8)

16		Calculation of Between-Groups Sum of Squares (SS): (2 marks) Calculation of Within-Groups Sum of Squares (SS): (2 marks)	(8)

		Calculation of Degrees of Freedom (df): (1 mark)	
		Calculation of Mean Squares (MS): (1 mark)	
		Calculation of F-Ratio: (1 mark)	
		Interpretation of F-Ratio: (2 marks)	
		PART D (Compulsory Question)	
17		Design a survey questionnaire, identify appropriate statistical tests, and provide recommendations. (10) ● Designing the survey questionnaire: 2 marks ● Identifying appropriate statistical tests: 4 marks ● Providing relevant recommendations: 4 marks	(10)

SET 1

UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EHBA 03

Course Name: HR Analytics

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Briefly state any two pitfalls of HR analytics.	(2)
2		Describe an advantage and one disadvantage of employee benchmarking.	(2)
3		Differentiate between reliability and validity of a measure.	(2)
4		Describe any two benefits of employee performance prediction.	(2)
5		List any three different sources of HR data and describe the structure.	(2)

PART B

		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Describe the four levels in PCMM.	(4)
7		Employee turnover rate and employee productivity rate are used to measure engagement in an organization. Elaborate what these rates signify and compare the conclusions that can be drawn from them.	(4)
8		Identify the factors that are critical when choosing an ATS.	(4)
9		AI can compound hidden biases in HR decision making. Critique this statement.	(4)
10		Two factors were identified that could predict employee performance – their intelligence (beta = 0.41, sig. = 0.06) and their score in simulation exercise (beta = 0.45, sig. = 0.03). At 5% confidence, which factor is useful for predicting performance?	(4)
11		Evaluate the ethical considerations which need to be kept in mind while developing data-based HR decision making.	(4)

PART C

		Answer any THREE questions from this section. Each question carries 8 marks	
12		Explain the four levels of HR analytics proficiency in an organization.	(8)
13		You have been asked to build a HR dashboard for diversity and inclusion. Identify the metric that you will use for the same.	(8)
14		There are two recruitment companies that have been contracted to help your organization with the recruitment. List and elaborate on the measures you will use to compare which company is more useful for your organization.	(8)
15		You are the training manager of a sales person training program that is going to commence in your organization **after** another 2 months. Elaborate the measures you will take to evaluate training effectiveness.	(8)
16		Differentiate between the data obtained through interview questions in an exit interview and responses to an employee satisfaction scale, and the analysis you will use.	(8)

PART D (Compulsory Question, 10 marks)

17		CEO of ABC organization is planning to strengthen the company's decision-making using Data Analytics. She is particularly concerned that the Human Capital decisions should be data	(10)

| | | driven. Describe the steps that will be required to convert the HR processes into one that is data driven. | |

SET 1

Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)

UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EHBA 03

Course Name: HR Analytics

Max. Marks: 60			Duration: 3 Hours

PART A		
Answer all questions, each carries 2 marks.		Marks
1	Poor data quality Different data sources that are not compatible with one another Issues with data privacy Human bias within the analytics.	(2)
2	Advantage: Improve employee performance to match industry standards Disadvantage: Set goals which are out of reach of employees, when not used in context.	(2)
3	Reliability is consistency of measure Validity is accuracy of measure.	(2)
4	Identify areas for training and development. Identify potential candidates for succession planning.	(2)
5	HRIS Business data Employee survey	(2)

PART B		
Answer any FOUR questions from this section. Each question carries 4 marks.		
6	Inconsistent management People management Competency management Capability management Change management	(4)
7	Employee turnover rate – who leaves the organization within a given time frame – provides insight into the organization's ability to retain talent and reflects the effectiveness of recruitment, onboarding strategies. Lag measure. Employee productivity rate – measures how efficiently employees perform tasks and contributes to organization's objectives. It provides insight into company process and system efficiency and effectiveness. Lead measure.	(4)
8	Budget Workflow Features Options in the market Upgradations	(4)
9	For: Hidden biases may become compounded if there is no transparency in algorithms used to	(4)

		support decision making.	
		Against: Biases can be identified using AI and used to improve decision making in HRM.	
10		Score in simulation exercise – beta is significant.	(4)
		Intelligence – beta is not significant.	
11		AI models – Identify right candidate in recruitment	(4)
		Chatbots – Answer FAQs.	
		AI based LMS – Personalise training and development for employees	

<div align="center">PART C</div>

<div align="center"><i>Answer any THREE questions from this section. Each question carries 8 marks</i></div>

12		Descriptive	(8)
		Diagnostic	
		Predictive	
		Prescriptive	
13		Employee happiness	(8)
		Retention	
		Promotion matrices	
		Pay equity	
14		Number of candidates per opening	(8)
		Interview to offer ratio	
		Staff retention rate	
		Candidate satisfaction rate	
		Hiring manager satisfaction	
15		Previous months sales person performance measures for all sales persons.	(8)
		Sales person performance measures after the training for control group and experiment group sales persons.	
16		Exit interview – qualitative data – content analysis	(8)
		Employee satisfaction scale – quantitative data – parametric and non-parametric analysis	

<div align="center"><i>PART D (Compulsory Question)</i></div>

17		**Data Driven Decision Making Model:**	(10)
		Define objectives based on HR functions	
		Identify methods and collect data.	
		Clean, organize and analyse data.	
		Draw conclusions based on objectives.	

SET 1

UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EMBA 04

Course Name: MARKETING ANALYTICS

Max. Marks: 60	Duration: 3 Hours

PART A

	Answer all questions, each carries 2 marks.	Marks
1	Explain the significance of marketing analytics in today's digital age.	(2)
2	What are some key performance indicators (KPIs) used in marketing analytics? Provide examples of KPIs for customer acquisition and retention.	(2)
3	Describe the process of data exploration in marketing analytics.	(2)
4	Define Customer Lifetime Value (CLV) and discuss its importance in marketing analytics.	(2)
5	Why is it essential for marketers to consider ethics and privacy concerns in marketing analytics?	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6	Discuss the role of data visualization techniques in marketing analytics. Provide examples of visualization methods used for marketing data.	(4)
7	Explain the concept of customer segmentation and its relevance in marketing analytics.	(4)
8	How can CLV be used for customer segmentation? Provide a practical example.	(4)
9	Describe the process of optimizing marketing mix strategies using data analytics.	(4)
10	Outline the differences between customer acquisition and retention strategies. Provide examples of each.	(4)
11	What are recommendation systems, and how can they be implemented in marketing analytics?	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12	Illustrate the steps involved in the marketing analytics process, from data collection to ROI calculations.	(8)
13	Explain how time series analysis can be used for trend prediction in marketing analytics. Provide a real-world scenario.	(8)
14	How does customer journey mapping contribute to understanding customer behavior? Provide a detailed explanation.	(8)
15	Discuss the ethical considerations that marketers should take into account when utilizing personalization techniques in marketing analytics.	(8)

16	Evaluate the impact of marketing analytics on marketing strategy and decision-making processes. Provide examples to support your answer.	(8)
	PART D (Compulsory Question)	
17	A company wants to improve its customer retention rates using marketing analytics. Develop a comprehensive strategy outlining the steps the company should take, including data collection, analysis, and implementation of retention strategies. Discuss potential challenges and how they can be addressed.	(10)

SET 1

	Scheme of Valuation / Answer Key	
	(Scheme of evaluation (marks in brackets) and answers of problems/key)	

UNIVERSITY OF CALICUT
..............SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EMBA 04

Course Name: MARKETING ANALYTICS

Max. Marks: 60	Duration: 3 Hours

PART A

	Answer all questions, each carries 2 marks.	Marks
1	- 1 Mark for explaining the importance of marketing analytics in the digital age. - 1 Mark for stating how it helps businesses make informed decisions.	(2)
2	- 1 Mark for the identifying relevant KPIs for customer acquisition and retention. - 1 Mark for examples provided are appropriate and demonstrate understanding.	(2)
3	- 1 Mark for clear description of the steps involved in data exploration. - 1 Mark for understanding of its importance in uncovering insights.	(2)
4	- 1 Mark for accurate definition of CLV and its significance in marketing analytics. - 1 Mark for the explanation of how it helps in understanding customer value.	(2)
5	- 1 Mark for stating the importance of ethics and privacy in marketing analytics. - 1 mark for understanding of potential risks and implications.	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6	- 2 Marks for explaining how data visualization aids in understanding complex data. - 2 Marks for examples provided are relevant and demonstrate understanding.	(4)
7	- 2 Marks for clear explanation of customer segmentation and its relevance. - 2 Marks for explaining different segmentation methods.	(4)
8	- 2 marks for explaining how CLV can be used for segmentation. - 2 marks for giving suitable examples.	(4)
9	- 2 Marks for description of the process of optimizing marketing mix strategies. - 2 Marks for explaining how data analytics can inform decision-making.	(4)
10	- 2 Marks for clearly explaining the differences between acquisition and retention strategies. - 2 marks for providing relevant examples.	(4)
11	- 2 Marks for suggesting recommendation systems in marketing analytics. - 2 Marks for explanting the implementation methods.	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12	- 2 Marks for mentioning various sources of data collection such as customer surveys, website analytics, social media data, etc. - 2 Marks for discussing techniques to clean and pre-process data like removing duplicates, handling missing values, etc.	(8)

	- 2 Marks for explaining techniques like segmentation, regression analysis, clustering, etc., used for analyzing data. - 2 Marks for explaining how ROI is calculated in the context of marketing analytics.	
1 3	- 2 Marks for defining time series analysis and its relevance in trend prediction. - 4 Marks for explaining how time series analysis techniques like moving averages, exponential smoothing, ARIMA, etc., can be applied to predict trends in marketing data. - 2 Marks for providing a relevant example illustrating the application of time series analysis in marketing, with clear explanation.	(8)
1 4	- 2 Marks for defining customer journey mapping and its importance in understanding customer behavior. - 4 Marks for explaining how customer journey mapping helps in identifying touchpoints, pain points, and motivations of customers throughout their journey. - 2 Marks for providing a thorough explanation with examples or illustrations.	(8)
1 5	- 2 Marks for listing ethical considerations such as privacy concerns, data security, transparency, consent, etc. - 4 Marks for discussing the potential impact of personalization techniques on individuals and society, both positive and negative. - 2 Marks for suggesting strategies or guidelines for marketers to ensure ethical use of personalization techniques.	(8)
1 6	- 4 Marks for analyzing how marketing analytics influences strategy formulation, targeting, positioning, product development, etc. - 4 Marks for providing specific examples or case studies demonstrating the impact of marketing analytics on decision-making processes.	(8)
	PART D (Compulsory Question, 10 marks)	
1 7	- 4 Marks for outlining a comprehensive strategy including data collection methods, analysis techniques, and retention strategies. - 3 Marks for identifying potential challenges such as data quality issues, integration of disparate data sources, privacy concerns, etc. - 3 Marks for providing solutions or mitigation strategies for the identified challenges.	(10)

SET 1

Course Code: BUS 3EFBA05
Course Name: FINANCIAL ANALYTICS

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Explain the significance of financial analytics in the digital age and mention one type of financial analytics.	(2)
2		Explain the importance of financial statement analysis in business decision-making and name two tools used in this analysis.	(2)
3		Describe the difference between technical analysis and fundamental analysis in the context of equity markets.	(2)
4		Define financial modeling and name two types of financial models commonly used in forecasting.	(2)
5		Define machine learning and differentiate between supervised and unsupervised learning with one example of how each can be applied in financial analytics.	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Discuss the role of data cleaning and preparation in the financial analytics process. Why is it critical for accurate financial modeling and forecasting?	(4)
7		A company's financial statements reveal the following: Sales in Year 1: $500,000; Sales in Year 2: $550,000; Net Income in Year 1: $50,000; Net Income in Year 2: $70,000. Calculate the Net Profit Margin for both years and discuss what the change implies about the company's financial health.	(4)
8		Given the following portfolio of stocks and their respective weights in the portfolio: Stock A (40% weight, Beta = 1.2), Stock B (60% weight, Beta = 0.8). Calculate the portfolio's beta and discuss its market risk implication compared to the overall market.	(4)
9		Compare and contrast regression analysis with time series analysis in the context of financial forecasting. Under what circumstances might one method be preferred over the other?	(4)
10		Describe the role of text mining in financial analytics and provide an example of how text mining can be utilized to gain insights from financial news or reports.	(4)
11		XYZ Corporation has provided the following financial information for the fiscal year ending 2022: Net Income: $120,000 Sales Revenue: $600,000 Total Assets: $1,000,000 Shareholders' Equity: $500,000 Using the Du Pont Analysis framework, calculate the following for XYZ Corporation: ● Return on Equity (ROE) for the fiscal year ending 2022. ● Break down the ROE calculation into its three components: ● Net Profit Margin (Net Income / Sales) ● Asset Turnover (Sales / Total Assets) ● Equity Multiplier (Total Assets / Shareholders' Equity)	(4)

		Based on your calculations, analyze how XYZ Corporation's operational efficiency, asset use efficiency, and financial leverage contribute to its Return on Equity.	
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
1 2		Given a dataset with financial transactions over the past year for a retail company, outline the steps you would take to perform exploratory data analysis (EDA). How would this EDA facilitate the creation of a financial model to forecast the company's sales for the next quarter? Include considerations for data sources, collection tools, and any specific financial analytics techniques you would apply.	(8)
1 3		Given the following simplified financial data for Company XYZ: Cash at start of year: $20,000 Cash at end of year: $40,000 Net income: $30,000 Depreciation expense: $5,000 Increase in accounts receivable: $10,000 Increase in accounts payable: $7,000 Prepare a Cash Flow Statement for the year and analyze the company's cash flow health, specifically focusing on operating, investing, and financing activities.	(8)
1 4		Consider a bond issued by Company XYZ with a face value of $1,000, a coupon rate of 5%, and 5 years to maturity. The current market yield is 4%. Calculate the bond's price. Additionally, using Value at Risk (VaR) methodology, assess the bond's price sensitivity to a 1% increase in market yield, assuming a 1-day time horizon and 95% confidence level. Discuss how investors can use this information for risk management and investment decisions.	(8)
1 5		Describe the process of building a financial model for a startup company looking to forecast its revenue over the next five years. Discuss the types of financial models that could be employed, the selection of variables for regression analysis, and how time series analysis could be integrated. Additionally, outline the steps involved in validating the model and ensuring its accuracy for decision-making purposes.	(8)
1 6		Consider a financial institution looking to predict loan default risk based on historical customer data. Outline a machine learning approach for this problem, specifying whether supervised or unsupervised learning would be more appropriate. Discuss the selection of algorithms, the process of feature selection, and how the model's performance could be evaluated. Additionally, consider the ethical implications of using machine learning in this context.	(8)
		PART D (Compulsory Question, 10 marks)	
1 7		BlueChip Tech's Market Expansion and Risk Management BlueChip Tech, a leading technology firm, has seen significant growth over the past year and is now looking to expand its operations into emerging markets. The company has a robust product line that includes both consumer and enterprise solutions, with a strong focus on innovation and sustainability. As part of its expansion strategy, BlueChip Tech is considering a significant investment in a new manufacturing facility in Southeast Asia and plans to finance this expansion through a combination of equity issuance and long-term bonds. The projected cost of the new facility is $200 million, with expected annual revenues contributing an additional 15% to the company's total revenue once fully operational.	(10)

Financial Data:

Current Equity Value: $1 billion

Current Bond Value: $500 million

Expected Annual Revenue Increase from Expansion: $150 million

Current Annual Revenue: $1 billion

Expected Investment Cost for Expansion: $200 million

Beta of BlueChip Tech: 1.2

Market Risk Premium: 5%

Risk-Free Rate: 2%

As part of its risk management strategy, BlueChip Tech has engaged in a comprehensive analysis to understand the various risks associated with this expansion, including market risk, credit risk, and operational risks related to setting up operations in a new market. The company is also exploring the use of derivatives to hedge against currency and interest rate risks.

Questions:

C. Calculate the expected return on equity (ROE) for BlueChip Tech post-expansion using the Capital Asset Pricing Model (CAPM) to estimate the cost of equity. Consider the impact of the new investment on the company's leverage and overall cost of capital. Use the provided financial data and assume the debt-to-equity ratio remains constant post-expansion.

D. Discuss the potential market and operational risks BlueChip Tech might face with its expansion into Southeast Asia. How could the company use financial derivatives as part of its risk management strategy to mitigate these risks? Consider the types of derivatives that might be most appropriate for hedging against currency and interest rate fluctuations in this context.

SET 1

UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 3EFBA05

Course Name: Financial Analytics

Max. Marks: 60			Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		Financial analytics enables businesses to make data-driven decisions, optimize financial performance, and predict future trends with greater accuracy. Explanation – 2 marks	(2)
2		Financial statement analysis is crucial for business decision-making as it provides insights into a company's financial health, performance trends, and operational efficiency. Mention the keytools also – 2 marks	(2)
3		Technical analysis and fundamental analysis are two primary methods used in equity markets to evaluate stocks. Explanation – 2 marks	(2)
4		Financial modeling involves creating representations of a company's financial performance to forecast future financial outcomes based on various scenarios. Two common types of financial models used in forecasting are the discounted cash flow (DCF) model and the three-statement model – Explanation 2 marks	(2)
5		Machine learning is a subset of artificial intelligence (AI) that enables systems to learn from data, identify patterns, and make decisions with minimal human intervention. Explanation – 2 marks	(2)

PART B

		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Data cleaning and preparation are foundational steps in the financial analytics process, essential for ensuring the accuracy and reliability of financial modeling and forecasting. – Explanation 4 marks	(4)
7		Year 1 Net Profit Margin: $50,000 / $500,000 = 10% (2 marks) Year 2 Net Profit Margin: $70,000 / $550,000 = 12.7% (2 marks) The increase in net profit margin from Year 1 to Year 2 suggests an improvement in the company's financial health. This indicates that the company has become more efficient at converting sales into actual profit, possibly through better cost management or an increase in higher-margin sales.	(4)
8		Portfolio Beta = (Weight of Stock A * Beta of Stock A) + (Weight of Stock B * Beta of Stock B) = (0.4 * 1.2) + (0.6 * 0.8) = 0.48 + 0.48 = 0.96 (2 marks) A portfolio beta of 0.96 implies that the portfolio is slightly less volatile than the overall market (assuming a market beta of 1.0). This suggests the portfolio might offer slightly lower risk compared to the market, potentially	(4)

		resulting in less dramatic swings in value in response to market movements. (Explanation 2 marks)	
9		Regression analysis is used to identify the relationship between a dependent variable and one or more independent variables, useful for causal analysis and prediction where variables are independent of time. Time series analysis, however, is specifically designed to analyze data points collected or indexed in time order, useful for forecasting future values based on historical trends. Explanation 2 marks	(4)
10		Text mining plays a significant role in financial analytics by extracting valuable information from unstructured text data, such as financial news, reports, and social media. Explanation 4 marks	(4)
11		Net Profit Margin: $120,000 / $600,000 = 20% Asset Turnover: $600,000 / $1,000,000 = 0.6 Equity Multiplier: $1,000,000 / $500,000 = 2 ROE Calculation: ROE = Net Profit Margin * Asset Turnover * Equity Multiplier = 20% * 0.6 * 2 = 24% The Du Pont analysis reveals that XYZ Corporation's ROE is driven by a strong net profit margin, indicating effective cost management and profitability. The asset turnover ratio shows moderate efficiency in using assets to generate sales. The equity multiplier indicates the company is leveraging debt to finance its assets, enhancing ROE. This combination suggests that while the company effectively converts sales into profit and leverages its assets well, there might be room to improve the efficiency of asset use to drive sales. (Each correct answer 1 mark)	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Data Collection and Cleaning: Gather financial transactions from various sources (POS systems, online sales platforms) and clean the data by removing duplicates, handling missing values, and correcting errors. Descriptive Analysis: Summarize the data to understand sales trends, including total sales, average transaction value, seasonality, and customer demographics. Visual Analysis: Use visual tools like time series plots, histograms, and box plots to identify patterns, outliers, and distribution of sales data. Correlation Analysis: Examine the relationship between sales and other variables (e.g., marketing spend, holidays, customer traffic) to identify potential predictors. Explanation 8 marks	(8)
13		Operating Activities: Net Income: $30,000 Adjustments: Add back depreciation ($5,000), increase in accounts receivable (-$10,000), increase in accounts payable ($7,000) Net cash provided by operating activities: $30,000 + $5,000 - $10,000 + $7,000 = $32,000 Investing Activities: Not provided, assuming no investing activities for	(8)

simplicity.

Financing Activities: Given the cash increase and operating cash flow, any difference not accounted for by investing activities might imply financing activities. For this example, we'll focus on operating activities.

Cash Flow Health Analysis: The company shows healthy cash flow from operations, indicated by a net increase in cash despite the increase in accounts receivable. The effective management of payables and the solid net income contribute positively to the operational cash flow.

Explanation 8 marks

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14 (8)

Step 1: Recalculate the Bond's Price for a Market Yield of 5%

Given:

Face Value (FV) = $1,000

Coupon Rate = 5%

Annual Coupon Payment (CP) = FV * Coupon Rate = $1,000 * 5% = $50

Number of Periods (n) = 5 years

New Market Yield = 5%

The bond price formula is:

$$\text{Bond Price} = \left(\text{Coupon Payment} \times \frac{1-(1+\text{Market Yield})^{-n}}{\text{Market Yield}}\right) + \left(\text{Face Value} \times (1 + \text{Market Yield})^{-n}\right)$$

Step 2: Value at Risk (VaR) Analysis

After calculating the bond's price at the new yield, we would typically use VaR to estimate the potential loss in the bond's value due to the yield increase. However, since VaR analysis requires a range of data and complex models, we'll focus on understanding the conceptual approach:

Step 3: Implications for Risk Management and Investment Decisions

Risk Management: Knowing the bond's sensitivity to yield changes helps in managing interest rate risk. Strategies might include diversification, duration analysis, or hedging.

Investment Decisions: Understanding price sensitivity aids in making decisions about buying, holding, or selling bonds based on interest rate expectations.

Step-by-Step Analysis:

Initial Price Calculation: At a 4% yield, the bond price was calculated as approximately $1,044.52, indicating the bond was priced at a premium due to its coupon rate being higher than the market yield.

Recalculated Price at 5% Yield: When the market yield increased to 5%, the bond price adjusted to $1,000.00, its face value, reflecting a decrease in price due to the yield increase.

Price Sensitivity and VaR Analysis: This change in bond price due to a 1% increase in yield illustrates the bond's interest rate risk. In a more detailed VaR analysis, we would quantify the potential loss from such changes under normal market conditions, providing a risk measure over a specified time horizon (e.g., 1 day) at a certain confidence level (e.g., 95%).

Implications for Investors:

Risk Management: Investors can use this sensitivity analysis to understand the bond's interest rate risk, helping them manage their portfolio's exposure to changes in market yields.

		Investment Decisions: Knowledge of how bond prices respond to yield changes aids investors in making informed decisions, especially in anticipating interest rate movements. Strategies might include adjusting the portfolio composition, considering bond duration to balance risk, or using financial derivatives as hedges.	
		Solution to the problem – 4 marks; Explanation – 4 marks	
15		Define Objectives: Establish that the model aims to forecast five-year revenue growth.	(8)
		Data Collection and Variable Selection: Gather historical sales data, market research, and industry benchmarks. Select variables like market size, growth rate, pricing strategies, and customer acquisition costs for regression analysis.	
		Model Selection: Choose between linear regression for basic forecasting or more complex models like ARIMA for time series analysis, depending on data patterns and business complexity.	
		Integration and Validation: Integrate findings from both regression and time series analysis to construct a comprehensive model. Validate the model through back-testing with historical data and adjust based on performance.	
		Accuracy and Decision-Making: Ensure model accuracy by regularly updating it with new data and re-evaluating assumptions. Use the model to support strategic decisions, such as market entry, pricing strategies, and budget allocations.	
16		Approach Selection: Supervised learning is more appropriate for predicting loan default risk, as historical data on loan performance (defaulted vs. non-defaulted) is available to train the model.	(8)
		Algorithm Selection: Decision trees, logistic regression, or gradient boosting machines could be effective in distinguishing between defaults and non-defaults based on historical data.	
		Feature Selection: Important features might include credit score, income level, employment status, loan amount, and previous default history. Feature selection techniques like recursive feature elimination can identify the most predictive variables.	
		Model Evaluation: Use metrics such as accuracy, precision, recall, and the ROC curve to evaluate model performance. Cross-validation helps assess the model's robustness across different data subsets.	
		Ethical Considerations: Ensure the model does not reinforce biases or discrimination by regularly auditing for fairness and transparency. Compliance with regulations like the Fair Credit Reporting Act (FCRA) and General Data Protection Regulation (GDPR) is crucial.	
		PART D (Compulsory Question)	
17		1. Expected Return on Equity (ROE) Calculation Using CAPM	(10)
		To calculate the expected return on equity (ROE) for BlueChip Tech post-expansion using the Capital Asset Pricing Model (CAPM), we first need to estimate the cost of equity and then consider how the expansion impacts the company's leverage and overall cost of capital. The CAPM formula is:	
		Cost of Equity = Risk-Free Rate + (Beta×Market Risk Premium)	

Cost of Equity=Risk-Free Rate+(Beta×Market Risk Premium)

Given:

Risk-Free Rate = 2%

Beta of BlueChip Tech = 1.2

Market Risk Premium = 5%

Let's calculate the cost of equity first.

Cost of Equity Calculation

Cost of Equity =2% + (1.2×5%)

Cost of Equity=2%+(1.2×5%)

Cost of Equity=2%+6%=8%

Cost of Equity=2%+6%=8%

The cost of equity, or the expected return on equity, is 8%.

Considering Leverage and Cost of Capital

Post-expansion, the company plans to maintain its debt-to-equity ratio constant while financing the $200 million investment through a mix of equity and long-term bonds. Assuming the debt-to-equity ratio remains constant, the additional debt and equity raised would proportionally increase the company's total capital, impacting its overall cost of capital.

However, without specific rates for the new debt and the proportion of debt and equity used in financing, we'll focus on the calculated cost of equity as the expected ROE under the CAPM framework.

2. Potential Risks and Use of Financial Derivatives

Market and Operational Risks:

Market Risks: Include currency fluctuations that can affect the cost of importing materials and repatriating profits. Interest rate fluctuations also pose a risk to the cost of borrowing.

Operational Risks: Can arise from setting up operations in a new market, such as supply chain disruptions, regulatory compliance challenges, and potential political instability in Southeast Asia.

Mitigating Risks with Financial Derivatives:

Currency Risk Mitigation: BlueChip Tech can use currency forwards, futures, or options to hedge against unfavorable currency movements. For example, entering into a forward contract to lock in the exchange rate for repatriating profits or for future import payments can protect against currency depreciation.

| | | Interest Rate Risk Mitigation: Interest rate swaps or options can be utilized to manage exposure to interest rate fluctuations. An interest rate swap could allow BlueChip Tech to exchange variable interest rate payments for fixed-rate payments, reducing uncertainty about future interest costs. | |
| | | By strategically using these derivatives, BlueChip Tech can mitigate financial risks associated with currency and interest rate fluctuations, ensuring more predictable financial outcomes as it expands into Southeast Asia. This approach allows the company to focus on operational excellence and market penetration without undue concern over financial market volatility. | |

<table>
<tr><td colspan="4" align="center">SET 1</td></tr>
<tr><td colspan="4" align="center">UNIVERSITY OF CALICUT
………. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR</td></tr>
<tr><td colspan="4" align="center">Course Code: BUS 4EBA 01</td></tr>
<tr><td colspan="4" align="center">Course Name: Artificial Intelligence and Machine Learning</td></tr>
<tr><td colspan="2">Max. Marks: 60</td><td colspan="2" align="right">Duration: 3 Hours</td></tr>
<tr><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="4" align="center">PART A</td></tr>
<tr><td colspan="2" align="center"><i>Answer all questions, each carries 2 marks.</i></td><td colspan="2">Marks</td></tr>
<tr><td>1</td><td>Define Artificial Intelligence and Machine Learning.</td><td colspan="2" align="center">(2)</td></tr>
<tr><td>2</td><td>What is Python? List three key features that make Python suitable for AI and ML</td><td colspan="2" align="center">(2)</td></tr>
<tr><td>3</td><td>Define 'sampling' in inferential statistics</td><td colspan="2" align="center">(2)</td></tr>
<tr><td>4</td><td>Define ensemble learning.</td><td colspan="2" align="center">(2)</td></tr>
<tr><td>5</td><td>Define Database Management System (DBMS).</td><td colspan="2" align="center">(2)</td></tr>
<tr><td colspan="4" align="center">PART B</td></tr>
<tr><td colspan="4" align="center"><i>Answer any FOUR questions from this section. Each question carries 4 marks.</i></td></tr>
<tr><td>6</td><td>Discuss the concept of cross-validation in machine learning. Why is it essential, and how does it help in model evaluation?</td><td colspan="2" align="center">(4)</td></tr>
</table>

7		Explain the importance of descriptive statistics in data analysis for AI & M	(4)
8		Explain the k-means clustering algorithm. Discuss its advantages.Provide an example illustrating the k-means algorithm.	(4)
9		List three popular Python libraries used in AI and ML. Briefly explain the primary functionality provided by each library.	(4)
10		Discuss the significance of the 'pandas' library in data manipulation for AI and ML tasks. Provide an example of using 'pandas' to load and explore a dataset.	(4)
11		Discuss the purpose of SQL (Structured Query Language) in database operations. Provide an example scenario where SQL is used to retrieve specific data.	(4)
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		Explain the concept of supervised learning. Provide an example of a real-world application and discuss the role of labeled data.	(8)
13		Explore the societal impact of AI. How can AI be leveraged for social good, and what potential risks and challenges should be addressed?	(8)
14		Explain the importance of feature engineering in machine learning. Provide three examples of feature engineering techniques.	(8)
15		Discuss the fundamentals of decision trees. How do random forests leverage decision trees in ensemble learning?	(8)
16		Discuss the role of probability distributions in AI & ML. Provide examples of situations where different probability distributions (e.g., normal distribution, binomial distribution) are applicable in machine learning tasks.	(8)
PART D (Compulsory Question, 10 marks)			
17		Present a case study where NLP is applied to solve a specific problem or enhance a business process. Discuss the challenges faced and the impact of the NLP solution	(10)

SET 1			
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)			
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR			
Course Code: BUS 4EBA 01			
Course Name: Artificial Intelligence and Machine Learning			
Max. Marks: 60			Duration: 3 Hours
PART A			
		Answer all questions, each carries 2 marks.	Marks
1		Artificial Intelligence refers to the development of computer systems that can perform tasks that typically require human intelligence. – Explanation 2 marks	(2)
2		Python is a high-level, general-purpose programming language that emphasizes readability, simplicity, and extensibility. – Explanation 2 marks	(2)
3		Sampling, in the context of inferential statistics, refers to the process of selecting a subset of individuals or elements from a larger population to make inferences or draw conclusions about the entire population. – Explanation 2 marks	(2)
4		Ensemble learning is a machine learning technique that involves combining the predictions of multiple individual models to produce a more accurate and robust prediction than any individual model alone. –	(2)

		Explanation 2 marks	
5		A Database Management System (DBMS) is a software application or system that facilitates the creation, organization, management, and retrieval of data from a database. – Explanation 2 marks	(2)

<div align="center">PART B</div>

<div align="center">Answer any FOUR questions from this section. Each question carries 4 marks.</div>

6		Cross-validation is a statistical technique used in machine learning to assess the performance and generalization ability of a predictive model. It involves partitioning the dataset into multiple subsets, training the model on a subset, and evaluating its performance on the remaining data. This process is repeated multiple times, allowing each subset to serve as both a training set and a validation set. The most common type of cross-validation is k-fold cross-validation.

Why Cross-Validation is Essential?

Avoiding Overfitting:

Model Assessment and Selection:

Robust Performance Metrics:

Optimizing Hyperparameters: | (4) |
| 7 | | Data Summarization:

Data Visualization:

Identifying Outliers:

Distribution Understanding:

Data Cleaning and Preprocessing:

Feature Selection:

Benchmarking and Baseline Models:

Data Normalization and Scaling:

Statistical Testing:

Communication and Interpretation: | (4) |
| 8 | | K-Means clustering is an unsupervised machine learning algorithm used for partitioning a dataset into K distinct, non-overlapping subsets (clusters). The algorithm aims to group data points that are similar to each other into the same cluster while ensuring that points in different clusters are dissimilar. The term "K" represents the number of clusters specified by the user.

Advantages of K-Means Clustering:

Simplicity:

Scalability:

Versatility:

Fast Convergence:

Parallelization:

Limitations of K-Means Clustering:

Sensitive to Initial Centroids:

Assumes Circular Clusters:

Fixed Number of Clusters (K): | (4) |

		Sensitive to Outliers:		
		Sensitive to Scaling:		
		Example Illustrating K-Means Algorithm:		
		Consider a dataset of customer purchase data with features like 'Annual Income' and 'Spending Score.' If we want to segment customers into distinct groups based on these features, we can use K-Means clustering.		
9		1.NumPy (Numerical Python)

Primary Functionality:

NumPy is a fundamental Python library for numerical computing. It provides support for large, multi-dimensional arrays and matrices, along with a collection of mathematical functions to operate on these arrays efficiently. NumPy is the foundation for many other scientific computing libraries in Python.

2. Pandas

Primary Functionality:

pandas is a powerful data manipulation and analysis library built on top of NumPy. It provides data structures such as DataFrame for handling structured data and Series for one-dimensional data. pandas simplifies data manipulation, cleaning, and analysis tasks, making it a go-to library for working with tabular data.

3.Scikit-learn:

Primary Functionality:

scikit-learn is a versatile machine learning library that provides simple and efficient tools for data mining and data analysis. It includes a wide range of algorithms for classification, regression, clustering, dimensionality reduction, and more. scikit-learn is designed to be user-friendly, making it accessible for both beginners and experienced practitioners. | | (4) |
| 10 | | The 'pandas' library is a crucial tool for data manipulation in the field of Artificial Intelligence (AI) and Machine Learning (ML). It provides high-level data structures, such as DataFrame, which is particularly well-suited for handling structured and labeled data. The significance of 'pandas' in AI and ML tasks lies in its ability to streamline data cleaning, preprocessing, and exploration, making it an essential component in the data science toolkit

Example of Using 'pandas' to Load and Explore a Dataset

"Coding" | | (4) |
| 11 | | Purpose of SQL (Structured Query Language) in Database Operations:

SQL, or Structured Query Language, is a domain-specific language designed for managing and manipulating relational databases. Its primary purpose is to provide a standardized and efficient way to interact with databases, enabling users to perform various operations such as data retrieval, insertion, updating, and deletion

Example Scenario: Retrieving Specific Data using SQL:

Consider a scenario where an e-commerce company wants to retrieve information about customers who made purchases in the last month. The company's database contains a 'Customers' table and a 'Orders' table with relevant information. The goal is to retrieve the names and email addresses of customers who made purchases in the last 30 days.

"Coding" | | (4) |
| | | | | |
| | | | | |

12		Supervised learning is a type of machine learning where the algorithm is trained on a labeled dataset, meaning that each input in the training data is paired with the corresponding correct output. The goal of supervised learning is for the algorithm to learn a mapping or relationship between the input features and the target output by generalizing from the labeled examples. Once trained, the model can make predictions or classifications on new, unseen data. **Real-World Application:** Example: Spam Email Classification Scenario: Consider a scenario where you want to develop a spam email classifier. You have a dataset of emails labeled as either spam or non-spam (ham). Each email in the dataset comes with features such as word frequencies, sender information, and email structure.	(8)
13		Societal Impact of AI: Leveraging AI for Social Good: Healthcare: Education: Environmental Conservation: Disaster Response: Accessibility: Social Services: **Risks and Challenges** Bias and Fairness: Privacy Concerns: .Job Displacement: Ethical Concerns: Security Risks: Lack of Regulation: Explainability and Transparency:	(8)
14		Feature engineering is a crucial step in the machine learning pipeline where domain knowledge is used to create new features or modify existing ones to enhance the performance of a model. Well-engineered features can significantly impact a model's ability to learn and generalize patterns from the data. The importance of feature engineering lies in the following aspects: Improved Model Performance: Addressing Non-Linearity: Dimensionality Reduction: Handling Missing Data: Increased Interpretability: **Three Examples of Feature Engineering Techniques** Polynomial Features: Binning or Discretization:	(8)

		Interaction Features:	
15		**Fundamentals of Decision Trees:** A decision tree is a tree-like model where each internal node represents a decision based on the value of a particular feature, each branch represents the outcome of the decision, and each leaf node represents the final prediction or decision. Decision trees are used for both classification and regression tasks and are popular due to their interpretability and ease of visualization Random Forests and Ensemble Learning: Random Forests is an ensemble learning technique that leverages multiple decision trees to make more accurate predictions. The fundamental idea behind ensemble learning is to combine the predictions of multiple weak learners (individual models) to create a stronger, more robust model. **How Random Forests Work** Bagging (Bootstrap Aggregating): Voting or Averaging: Reducing Overfitting: **Advantages of Random Forests** Improved Accuracy: Robustness: Feature Importance: Versatility:	(8)
16		Role of Probability Distributions in AI & ML: Probability distributions play a crucial role in AI (Artificial Intelligence) and ML (Machine Learning) by providing a mathematical framework to model uncertainty, randomness, and variability in data. Understanding and utilizing probability distributions is fundamental for tasks such as statistical inference, parameter estimation, hypothesis testing, and generating probabilistic predictions. Different probability distributions are applied in various machine learning contexts based on the characteristics of the data and the assumptions made about its underlying structure. **Examples of Probability Distributions in AI & ML:** **Normal Distribution (Gaussian Distribution):** Characteristics: The normal distribution is characterized by a bell-shaped curve and is completely defined by its mean (μ) and standard deviation (σ). Applicability: Example 1 - Height of Individuals: In predicting human heights, the normal distribution is often used because height tends to follow a bell-shaped curve in a population. Example 2 - Measurement Errors: In regression analysis, the assumption of normally distributed errors is essential for accurate parameter estimation using techniques like Ordinary Least Squares (OLS). **Binomial Distribution:**	(8)

		Characteristics: The binomial distribution models the number of successes in a fixed number of independent Bernoulli trials, where each trial has two possible outcomes (success or failure). Applicability: Example - Coin Flips: In the context of binary classification, the binomial distribution can be used to model the number of correct predictions in a series of binary decisions (e.g., predicting heads or tails in coin flips).	
17		XYZ Corp, an e-commerce platform, faced challenges in efficiently handling a large volume of customer support inquiries. Traditional methods were time-consuming and often led to delays in response times, resulting in customer dissatisfaction. To address these issues, XYZ Corp decided to implement a Natural Language Processing (NLP) solution to automate and improve its customer support process. **Objective:** The primary objective was to enhance customer support efficiency by automating the initial inquiry handling process using NLP. The goal was to accurately understand and categorize customer inquiries, provide relevant information or solutions, and route complex issues to human agents. **Challenges Faced:** Ambiguity and Variability: Customer inquiries often contained ambiguous or variable language, making it challenging for the NLP models to accurately interpret user intent. Multilingual Support: XYZ Corp operated in multiple regions, each with its language nuances. Adapting the NLP models to different languages and cultural contexts posed a significant challenge. Continuous Learning: The NLP models required continuous learning and adaptation to new phrases, industry terms, and evolving customer language patterns. An ongoing training and retraining process was implemented.	(10)

SET 1

UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EBA 02
Course Name: Big Data and Cloud Computing

Max. Marks: 60			Duration: 3 Hours

<div align="center">PART A</div>

		Answer all questions, each carries 2 marks.	Marks
1		What is AWS Storage Services?	(2)
2		Explain the benefits of big data in marketing	(2)
3		Define materialized views in the context of database management systems.	(2)
4		Explain with examples how each type of data is generated and used in business analytics.?	(2)
5		Differentiate between GCP and AZURE	(2)

<div align="center">PART B</div>

<div align="center"><i>Answer any FOUR questions from this section. Each question carries 4 marks.</i></div>

6		Discuss the characteristics of virtualized environments and explain how virtualization relates to cloud computing.	(4)

7		Explain the characteristics of Big data.	(4)
8		How does Sharding work?	(4)
9		Explain the DCE Framework.	(4)
10		Define Cloud computing. Differentiate public and private clouds.	(4)
11		With the help of a neat diagram explain the architecture of cloud data service.	(4)
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		What is a Cloud Service Provider? How to choose a Cloud service provider?	(8)
13		Describe the concepts of models in distributed database systems. Explain how these techniques contribute to cloud computing concepts.	(8)
14		Explain the fundamentals of Hadoop.	(8)
15		Compare and contrast NoSQL databases with traditional relational databases. Explain the concepts of NoSQL	(8)
16		Explain PaaS model for cloud computing. With a neat diagram write about Google App Engine for PaaS applications.	(8)
PART D (Compulsory Question, 10 marks)			
17		Create an AWS architecture that maximizes performance, reliability, and cost-efficiency while leveraging a wide range of AWS services.	(10)

SET 1			
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)			
UNIVERSITY OF CALICUT ....SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR			
Course Code: BUS 4EBA 02			
Course Name: Big Data and Cloud Computing			
Max. Marks: 60			Duration: 3 Hours
PART A			
Answer all questions, each carries 2 marks.			Marks
1		Concept of AWS Storage – 1 Mark Types – Object, File and Block - 1 mark	(2)
2		List out the benefits – Minimum 6 Points Required (0.5 Mark/ Question)	(2)
3		A materialized view is a view whose contents are computed and stored. Materialized view is also a logical virtual table, but in this case the result of the query is stored in the table or the disk. (1 Mark)	(2)
4		Concept of Digital Data – (1 Mark) Classification - Structured, Unstructured and Semi Structured – (1 Mark)	(2)

5		Minimum 6 Points (0.5/ Point)	(2)
PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		Virtualization is a technique to separate a service from the underlying physical delivery of that service. (1 Mark)	(4)
		Work of Virtualization in Cloud Computing	
7		Volume, Variety, Velocity, and other characteristics.(1 mark for each)	(4)
8		Sharding determines the problem with horizontal scaling, breaking the system dataset and store over multiple servers, adding new servers to increase the volume as needed. (1 Mark)	(4)
		With the help of diagram explain sharding (3 Mark)	
9		Distributed Computing Environment (DCE)	(4)
		Concepts with Picture (1 mark)	
		Remote Procedure Call(RPC): (1.5 mark)	
		Distributed File System(DFS): (1.5 mark)	
10		Definition - 1 Mark	(4)
		Types (4 Types)	
		Public cloud, Private cloud, Hybrid cloud, Community cloud, Multicloud – 1 Mark	
		Differentiation (6 Points Minimum required) – 2 Mark	
11		Architecture diagram –(1 Mark)	(4)
		The cloud architecture is divided into 2 parts	
		Frontend (1 Mark)	
		Backend (2 Mark)	
PART C			
Answer any THREE questions from this section. Each question carries 8 marks			
12		Definition and Types – 6 Marks (each types carries 2 marks)	(8)
		Selection criteria – 2 Mark	
13		Single Server, Sharding, Master-Slave Replication, Peer-to-Peer Replication – (4 Marks) Scalability- Elasticity – Agility-Fault Tolerance- Disaster Recovery-High Availability (4Marks)	(8)
14		Features of Hadoop, Key Advantages of Hadoop, Versions, Hadoop Distributions	(8)
15		NoSQL Details – (6 Points 2 Mark) Types of NoSQL database: (2Marks) Graph Databases: Examples – Amazon Neptune, Neo4j Key value store: Examples – Memcached, Redis, Coherence Column: Examples – Hbase, Big Table, Accumulo Document-based: Examples – MongoDB, CouchDB, Cloudant Advantages and disadvantages (2 Marks) Key Features of NoSQL (3 Marks for Any 6 Points) Dynamic schema: Horizontal scalability: Document-based: Key-value-based: Column-based:	(8)

		Distributed and high availability: Flexibility Performance:	
16		Platform-as-a-Service offers the runtime environment for applications. It also offers development and deployment tools required to develop applications. PaaS has a feature of point-and-click tools that enables non-developers to create web applications. Concept - Benefits - Issues – Characteristics -Types of PaaS (4 Mark) Google App Engine for PaaS applications Diagram and explanation (4 Marks)	(8)
		PART D (Compulsory Question)	
17		Introduction to AWS and Global Infrastructure (3 Mark) Creating an AWS Account and Touring the AWS Console (4 Mark) Overview of AWS Services (3 Mark)	(10)

UNIVERSITY OF CALICUT

.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EBA 03

Course Name: Social media, Web & Text Analytics

Max. Marks: 60			Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		What is SNS?	(2)
2		What is Organic Traffic?	(2)
3		Discuss about the UTF Parameters in Facebook.	(2)
4		Describe how is bounce rate is calculated for a website and its Pages?	(2)
5		What is sentiment analysis?	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		Explain various technique to measure social media Campaign.	(4)
7		How to prepare the text data for the analysis?	(4)
8		Explain the different types of social media analytics.	(4)
9		How social media analytics can be used in service sector. Explain with example.	(4)
10		What is Google analytics? Name various applications of Google analytics.	(4)
11		Define the techniques and methods to analyze social media data.	(4)

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		What is social media? Describe Common features of social media?	(8)
13		Describe how does Facebook Measure Post Performance?	(8)
14		Differentiate stemming and Lemmatisation with example	(8)
15		Define visit characterization terms.	(8)
16		Describe the process of data gathering in social media analytics.	(8)

PART D (Compulsory Question, 10 marks)

17		Explain the working of web crawling and where it is used? Explain with suitable example.	(10)

Scheme of Valuation/Answer Key		
(Scheme of evaluation (marks in brackets) and answers of problems/key)		

UNIVERSITY OF CALICUT		
............SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR		

Course Code: BUS 4EBA 03		

Course Name: Social Media, Web & Text Analytics		

Max. Marks: 60		Duration: 3 Hours

PART A		
	Answer all questions, each carries 2 marks.	Marks
1	Interaction takes place on social media is done through the medium of a variety of Social Networking Sites (SNS). These SNSs are purely based with the sole purpose of interaction. They have influenced all the sectors whether it is business, socializing, trade, retailing, politics, entertainment etc . There are number of SNS such as Facebook, Twitter, Instagram, LinkedIn, Google+, Whatsapp, Snapchat, Hike, Viber and many more. But in terms of popularity amongst users , Facebook takes the lead- (2 mark)	(2)
2	Organic traffic is defined as visitors coming from a search engine, such as Google or Bing, and is the primary channel that inbound marketing strives to increase. This does not include paid search ads, but that doesn't mean organic traffic isn't impacted by paid search or display advertising, either positively or negatively. People generally trust search engines, and sayings such as "just Google it" are evidence that online searches are part of our everyday lives. Thus, paid search, display, or even offline campaigns can drive searches, which may increase organic traffic while those campaigns are running. - (2 mark)	(2)
3	UTM stands for "Urchin tracking module. Facebook recognizes the importance of parameters in your ads and has made it easier to track them through Facebook Ads.	(2)
	Head to Ads Manager and select or create a campaign, go to the Ad level, then create a new ad or select an existing one.	
	Scroll down and then click Build a URL Parameter, and enter your website URL and the parameters you want to track.	
	You can make your own custom URL parameters or use the dynamic parameters pre-made by Facebook:	
	Facebook Dynamic Parameters offers the benefit of auto-populating the values based on the information you input into your campaign, rather than having the user type them out, thus saving you valuable time.	
	For example, if you want to auto-populate your campaign name for the utm_campaign parameter in order to track a particular campaign, you would click the box next to "Campaign Name" and select the {{campaign.name}} option. This is just an example of a UTM code but utm_campaign is one of the most essential parameters to understand and use effectively when creating a marketing campaign.	
	- (2 mark)	
4	Bounce Rate is defined as the percentage of visitors that leave a webpage without taking an action, such as clicking on a link, filling out a form, or making a purchase. It indicates how frequently users visit your	(2)

		site without interacting or exploring further. While some bounces are unavoidable, a high bounce rate may indicate that your content is unsatisfactory or poorly optimized. Bounce rate is calculated by the total number of one-page visits divided by the total number of entries to a website. - (2 mark)	
5		Sentiment Analysis is a powerful technique which plays a vital role in predictive analysis. All these things flows in well planned stream and are interconnected firmly such as : The prime most concern for an organization is to establish a long term and good customer association and that association can only be developed if the needs and interests of customers would be thoroughly analyzed. These needs and interests can be analyzed by getting a deep insight of various social networking sites where the users product is being discussed and viewed, analysis of such discussions and reviews can be made by tracking the sentiments of those discussions i.e. either they are saying good about users product or bad and even can both ways i.e. neutral. Analyzing the discussions and keeping the track of discussions are said to the sentiment analytics which analyze the emotions of a customer in the verbal form. This is done because one can express his/her emotions or sentiments about any particular product in verbal form only as there is no other way of expressing the sentiments on social media. - (2 mark)	(2)
PART B
Answer any FOUR questions from this section. Each question carries 4 marks.
6		**website traffic** - (1 mark) • Clicks • Click-through-rate • Bounce rate **follower growth** - (1 mark) Take the number of followers you gained over the course of your campaign, divide by the number of followers you started with, and	(4)

		multiply by 100%. This is your follower growth rate (within a chosen time period).	
		brand awareness increase - (1 mark)	
		• Reach	
		• Impressions	
		• Views	
		leads and conversions - (1 mark)	
		• Bookings	
		• Enquiries	
		• Direct messages/emails	
		• Phone calls	
		• Sales	
		• Registrations	
		• Subscriptions	
		• Downloads	
		• Donations	
		• Installs	
7		Segmenting Text into Words (1) the source of the text data, (2) the purpose of the analysis, and (3) your programming tools. Processing large amounts of raw text for analysis always entails chopping it into smaller pieces. (1 Mark) Text is a linear sequence of characters/symbols and white spaces. A "token" is a series of characters treated as meaningful unit. Typically these would be words. Word tokenization transforms the text into a series of word tokens. At this stage, certain characters—such as some punctuation—are typically also eliminated. For example, the above English sentences would be turned into the following list of tokens: 'tokenization', 'transforms', 'the', 'text', 'into', 'a', 'series', 'of', 'word', 'tokens', 'at', 'this', 'stage', 'certain', 'characters', 'such', 'as', 'some', 'punctuation', 'are', 'typically', 'also', 'eliminated' The list of tokens becomes input for further processing. - (2 mark) Part of Speech (POS) Tagging Tagging the tokens as nouns, verbs, adjectives, etc., is important for the accuracy of further steps of language processing. POS-tagging takes a sequence of words and attaches a part of speech to each word using both the word's definition and relationship with adjacent words. - (1 mark)	(4)
8		There are four main types of social media analytics to achieve social media success. These four types are: Descriptive analytics Diagnostic analytics Predictive analytics Prescriptive analytics - (1 mark/ Point)	(4)

9		Social media analytics helps organizations understand their targeted audience.	(4)
		Detailed explanation required.	
		- (1 mark/ Point)	
10		Google Analytics is a free Web analytics service that provides statistics and basic analytical tools for search engine optimization (SEO) and marketing purposes. The service is available to anyone with a Google account. Google launched the service in November 2005 after acquiring Urchin. Google Analytics is now the most widely used web analytics service on the Internet. Google analytics is a powerful tool that analyzes:	(4)
		Website Traffic - (2 mark)	
		1. Where visitors came from & How 2. How they are navigating through your website. 3. Behaviour	
		Track Conversions - (2 mark)	
		1. Downloads 2. Page Views 3. Registrations	
11		Keyhole AgoraPulse Brandwatch Buffer BuzzSumo Crowdbooster Edgar Google Analytics Klout Littlebird Netbase OKtopost Quintly RivalIQ Sale for Marketting Simply Measured Social Bakers SumAll Followerwonk SocialBro Tailwind TweetReach Social Report Moz Pro Buffer Google Analytics SumAll Followerwonk Crowdbooster RivalIQ Social Bakers Social Report Moz pro Hootsuite Social Mentions Iconosquare Viralwoot Collecto Cyfe Beevolve Riffle MyTopTweet Howsocialable	(4)
		(0.5Marks / Point)	

PART C

Answer any THREE questions from this section. Each question carries 8 marks

12		Social media are interactive technologies that facilitate the creation and sharing of information, ideas, interests, and other forms of expression through virtual communities and networks. The social media platforms allow the digital users to communicate with each other, have conversations, share information and create content. - (1 mark)	(8)
		Features of social media- (1 mark)	
		Social media are interactive internet-based platforms. - (1 mark)	
		User-generated content such as text, posts, comments, digital photos, videos, and data generated through all online interactions is the lifeblood of social media.	
		Users create service-specific profiles for the websites or apps that are designed and maintained by the social media organization	
		Social media helps increase online social networks by connecting a user's profile with those of other individuals or groups. - (5 mark)	
13		Facebook Page & Post metrics	(8)
		Facebook brand awareness metrics	
		Facebook Group metrics	
		Facebook video metrics	
		Facebook ad metrics	

		- (2 mark/Point)		
14		Stemming is the process in which the affixes of words are removed and the words are converted to their base form. (4 Mark)	(8)	
		In lemmatization, the word we get after affix removal (also known as lemma) is a meaningful one. Lemmatization makes sure that lemma is a word with meaning and hence it takes a longer time to execute than stemming. - (4 mark)		
15		Entry Page	(8)	
		Landing Page		
		Exit Page		
		Visit Duration		
		Referrer		
		Search Referrer		
		Click-through		
		Click-through Rate/Ratio - (1 mark/Point)		
16		Data is gathered from . Database Dumps, Public Data Sets, & Buying Data - (4 mark)	(8)	
		Official APIs – JSON & XML A web API (Application Programming Interface) is an interface that allows for the exchange of data via a (relatively) stable interface. Returns formatted data that is easy to parse with a computer. - (4 mark)		

PART D (Compulsory Question)

17		**Basic crawler operation** - (3 mark)	(10)	
		Begin with known "seed" pages		
		Fetch and parse them		
		Extract URLs they point to		
		Place the extracted URLs on a queue		
		Fetch each URL on the queue and repeat		
		Processing steps in crawling- (4 mark)		
		Pick a URL from the frontier		
		Fetch the document at the URL		
		Parse the URL		
		Extract links from it to other docs (URLs)		
		Check if URL has content already seen		
		If not, add to indexes For each extracted URL		
		Ensure it passes certain URL filter tests		
		Check if it is already in the frontier (duplicate URL elimination)		
		E.g., only crawl .edu, obey robots.txt, etc.		

| | | **Basic crawl architecture** - (3 mark) | |

		UNIVERSITY OF CALICUT	
		.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR	
		Course Code: BUS 4EBA 04	
		Course Name: Industry 4.0 and Internet of Things	
Max. Marks: 60			Duration: 3 Hours

		PART A	
		Answer all questions, each carries 2 marks.	Marks
1		What is Industry 4.0, and why is it important?	(2)
2		Name four technologies that are fundamental to Industry 4.0.	(2)
3		Describe the goal of adopting Industry 4.0 in manufacturing.	(2)
4		What is Artificial Intelligence (AI), and why is it significant?	(2)
5		Define Big Data.	(2)
		PART B	
		Answer any FOUR questions from this section. Each question carries 4 marks.	
6		Briefly describe the history of AI.	(4)
7		Name a major hardware component of IoT.	(4)
8		Describe one tool used for Big Data analytics.	(4)
9		Explain the challenges and solutions related to IoT data security.	(4)
10		How is Big Data applied in Machine Learning?	(4)
11		Explain the design principles behind Industry 4.0 and how they contribute to creating smart factories.	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
12		Describe how Artificial Intelligence (AI) and Big Data analytics work together to optimize production processes in Industry 4.0.	(8)
13		Analyze the societal impacts of Artificial Intelligence, focusing on both the positive contributions and the challenges it poses.	(8)
14		Evaluate the role of Industry 4.0 in transforming the transportation and logistics sector.	(8)
15		Explain the role of Augmented Reality (AR) in Industry 4.0 for various applications like maintenance, training, and quality control.	(8)
16		Compare and contrast the capabilities of cloud-based and on-premise Big Data solutions for industrial applications. Consider factors like scalability, security, and cost-effectiveness.	(8)
		PART D (Compulsory Question, 10 marks)	
17		Case Study: Implementing Industry 4.0 in Bharti Auto Components

Bharti Auto Components, a mid-sized player in the automotive components sector located in Pune, embarked on a transformative journey towards Industry 4.0 to enhance its competitiveness in the global market. Facing challenges such as high production costs, inefficiencies in the supply chain, and increasing demands for customization, Bharti Auto Components | (10) |

decided to leverage the principles of Industry 4.0 to address these issues head-on.

The company initiated the transformation by integrating Internet of Things (IoT) devices across its production lines. These devices collected real-time data on machine performance, production rates, and quality control metrics. By analyzing this data using Artificial Intelligence (AI) and Big Data analytics, Bharti Auto Components was able to identify bottlenecks in production processes and predict machinery maintenance needs, significantly reducing downtime.

Furthermore, Bharti Auto Components adopted smart robotics to automate repetitive tasks, enhancing precision and efficiency while freeing up human workers for more complex tasks. The implementation of Additive Manufacturing (3D printing) allowed for rapid prototyping and the production of customized parts on demand, opening up new markets and customer segments.

The adoption of a cloud-based platform enabled seamless data exchange with suppliers and customers, improving supply chain visibility and collaboration. This digital integration facilitated just-in-time production and inventory management, reducing waste and lowering storage costs.

As a result of these initiatives, Bharti Auto Components reported a 20% increase in production efficiency, a 15% reduction in operating costs, and a significant improvement in product quality and customer satisfaction within the first year.

Answer the following questions
a) What challenges did Bharti Auto Components face that prompted its transformation towards Industry 4.0?
b) How did IoT devices contribute to improving production processes at Bharti Auto Components?
c) Discuss the role of smart robotics and additive manufacturing in enhancing productivity and customization.

SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT .... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 4EBA 04
Course Name: Industry 4.0 and Internet of Things

Max. Marks: 60			Duration: 3 Hours

PART A			
		Answer all questions, each carries 2 marks.	Marks
1		Industry 4.0 represents the fourth industrial revolution, focusing on digitalization and automation to improve efficiency and productivity.	(2)
2		Four fundamental technologies to Industry 4.0 are a) Internet of Things (IoT), b) Artificial Intelligence (AI), c) Big Data, and d) Robotics.	(2)
3		The goal of adopting Industry 4.0 in manufacturing is to increase automation, improve data exchange, and enhance manufacturing processes and productivity.	(2)
4		Artificial Intelligence (AI) is the simulation of human intelligence in machines, significant for enabling smart automation and decision-making.	(2)
5		Big Data refers to extremely large data sets that can be analyzed computationally to reveal patterns, trends, and associations.	(2)

PART B			
Answer any FOUR questions from this section. Each question carries 4 marks.			
6		**History of AI:** ● Early roots in philosophy and automata (ancient times). ● Alan Turing's "Thinking Machine" and the Turing Test (1950s). ● Symbolic reasoning and expert systems (1960s & 70s). ● "AI Winter" due to limitations (1980s). ● Rise of neural networks and machine learning (1990s onwards). ● Deep learning breakthroughs and widespread adoption (2010s).	(4)
7		**Major Hardware Component of IoT:** ● **Sensors:** Collect data from the physical world (temperature, motion, etc.). ● **Microcontrollers:** Process and transmit data. ● **Network connectivity:** Enables communication between devices (Wi-Fi, Bluetooth).	(4)
8		**Big Data Analytics Tool:** ● **Apache Spark:** Open-source framework for large-scale data processing. ● **Hadoop:** Distributed computing platform for storing and analyzing big data. ● **Machine learning libraries (e.g., TensorFlow):** Used for tasks like prediction and classification.	(4)

9		**IoT Data Security Challenges & Solutions:** ● **Vulnerable devices:** Limited processing power and security features. ● **Data breaches:** Unauthorized access to sensitive information. ● **Encryption:** Protect data at rest and in transit. ● **Authentication:** Verify device and user identities. ● **Network security:** Secure communication channels.	(4)
1 0		**Big Data in Machine Learning:** ● **Training data:** Used to teach algorithms to recognize patterns and make predictions. ● **Model development:** Big data allows for building and refining complex models. ● **Hyperparameter tuning:** Optimize model performance based on larger datasets. ● **Improving accuracy andgeneralizability:** Large datasets lead to more robust models.	(4)
1 1		**Design Principles of Industry 4.0 and Smart Factories:** ● **Interconnectivity:** Machines, devices, and systems communicate seamlessly. ● **Information transparency:** Real-time data availability for informed decision-making. ● **Decentralized decision-making:** Autonomous systems adapt to changing conditions. ● **Interoperability:** Standardized protocols enable easier integration. ● **Cybersecurity:** Secure systems and data against cyberattacks.	(4)
		PART C	
		Answer any THREE questions from this section. Each question carries 8 marks	
1 2		Optimizing Production Processes with AI and Big Data in Industry 4.0: • AI algorithms analyze Big Data collected from production lines to identify inefficiencies and predict equipment failures. • Real-time data analytics enable adaptive production planning and inventory management, reducing waste and downtime. • Predictive maintenance schedules are optimized based on data trends, minimizing disruptions. • Enhanced quality control through AI-driven inspection systems that detect defects more accurately and swiftly than human operators.	(8)
1 3		Societal Impacts of Artificial Intelligence: Positive Contributions: • Enhances productivity and efficiency in various sectors, including healthcare, education, and manufacturing. • Enables smarter decision-making through data-driven insights and automation. • Powers innovations that can solve complex problems, from climate change to disease diagnosis. Challenges: • Job displacement due to automation raises concerns about employment and skill gaps. • Ethical issues around privacy, surveillance, and bias in AI	(8)

		algorithms. • Dependence on AI systems introduces risks of system failures and security vulnerabilities.	
1 4		Transforming Transportation and Logistics with Industry 4.0: • Digital tracking systems improve the transparency and efficiency of supply chains. • Autonomous vehicles and drones optimize delivery routes, reducing costs and carbon footprints. • IoT devices monitor cargo conditions in real-time, ensuring product quality during transport. • Advanced analytics for demand forecasting and inventory management minimize overstock and shortages.	(8)
1 5		Role of Augmented Reality (AR) in Industry 4.0: • AR overlays digital information on physical environments, aiding in complex machinery maintenance by providing step-by-step guidance. • Enhances training programs by simulating real-world scenarios, reducing learning curves and safety risks. • Improves quality control processes by enabling inspectors to compare real-time visuals against digital models and standards.	(8)
1 6		Cloud-based vs. On-premise Big Data Solutions for Industrial Applications: Cloud-based Solutions: • Offer scalable resources to manage varying data volumes without significant upfront investment. • Facilitate remote access to data and analytics, enhancing collaboration but may pose data sovereignty and privacy concerns. • Generally more cost-effective for companies needing flexible and scalable solutions. On-premise Solutions: • Provide greater control over data security and compliance with industry regulations. • Require significant initial investment in infrastructure and ongoing maintenance costs. • Better suited for organizations with high-security requirements and less fluctuation in data processing needs.	(8)
		PART D (Compulsory Question)	
1 7		a) Bharti Auto Components faced high production costs, inefficiencies in the supply chain, and increasing demands for customization, which prompted its transformation towards Industry 4.0. b) IoT devices enabled real-time data collection on machine performance and production rates, identifying bottlenecks and predicting maintenance needs. c) Smart robotics automated repetitive tasks, enhancing efficiency, while additive manufacturing enabled rapid prototyping and on-demand customization, expanding market opportunities.	(10)

SET 1

UNIVERSITY OF CALICUT
.... SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR

Course Code: BUS 4EBA 05

Course Name: BUSINESS DATABASE SYSTEM

Max. Marks: 60		Duration: 3 Hours

PART A

		Answer all questions, each carries 2 marks.	Marks
1		List the components of a database environment	(2)
2		Define a Relational databases	(2)
3		What is a hash index?	(2)
4		What are the different types of Entities?	(2)
5		What are the components of a DDBMS?	(2)

PART B

Answer any FOUR questions from this section. Each question carries 4 marks.

6		a. Compare traditional File Systems with Database Management Systems b. Explain advantages and disadvantages of DBMS	**(4)**
7		Explain in details various data models	(4)
8		Detail on Hashing Techniques	(4)
9		Explain data Fragmentation	(4)
10		Analyze on Distributed database design security and integrity violations	(4)
11		Develop distributed database design concepts	(4)

	PART C	
	Answer any THREE questions from this section. Each question carries 8 marks	
12		Explain Buffering of blocks	(8)
13		Explain Data abstraction and schema architecture	(8)
14		Analyze the different types of database users, including end-users, application programmers, and database administrators. What are their respective roles and responsibilities in the database environment?	(8)
15		Analyze the components of an Entity-Relationship (ER) model and explain the purpose of each component using examples.	(8)
16		Compare and contrast role-based access control (RBAC), discretionary access control (DAC), and mandatory access control (MAC) models in terms of their suitability for distributed environments.	(8)
	PART D (Compulsory Question, 10 marks)	
17		Develop an ER diagram for keeping track of information about a company database taking into account atleast five entities. With a neat block diagram, represent the architecture of a typical DBMS required for the company.	(10)

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SET 1
Scheme of Valuation/Answer Key (Scheme of evaluation (marks in brackets) and answers of problems/key)
UNIVERSITY OF CALICUT …….. SEMESTER MBA DEGREE EXAMINATION, MONTH, YEAR
Course Code: BUS 4EBA 05
Course Name: BUSINESS DATABASE SYSTEM

Max. Marks: 60			Duration: 3 Hours

PART A			
		Answer all questions, each carries 2 marks.	**Marks**
1		List the components of a database environment (2) ● Data model (0.5) ● Data structure (0.5) ● DBMS (0.5) ● Application programs (0.5)	(2)
2		Define a Relational database (2) ● Clear definition mentioning tables/relations (1) ● Mention of relations between tables (1)	(2)
3		What is a hash index? (2) ● Definition of hash index (1) ● Explanation of its purpose or usage (1)	(2)
4		What are the different types of Entities? (2) ● Mention of types (1) ● Brief explanation of each type (1)	(2)
5		What are the components of a DDBMS? (2) ● Distributed database (0.5) ● Network (0.5) ● Local DBMS (0.5) ● Global DBMS (0.5)	(2)

PART B
Answer any FOUR questions from this section. Each question carries 4 marks.

6		a. Compare traditional File Systems with Database Management Systems (2)
		   ● Comparison points (2)
		b. Explain advantages and disadvantages of DBMS (2)
		   ● Advantages (1)
		   ● Disadvantages (1)
			(4)

7		Explain in details various data models (4)
		   ● Explanation of different data models (2)
		   ● Examples or illustrations (2)
			(4)

8		Detail on Hashing Techniques (4)
		   ● Explanation of hashing techniques (3)
		   ● Examples or use cases (1)
			(4)

9		Explain data Fragmentation (4)
		   ● Definition of data fragmentation (1)
		   ● Explanation of types of data fragmentation (2)
		   ● Use cases or examples (1)
			(4)

10		Analyze on Distributed database design security and integrity violations (4)
		   ● Discussion of security issues (2)
		   ● Discussion of integrity violations (2)
			(4)

11		Develop distributed database design concepts (4)
		   ● Explanation of distributed database design (2)
		   ● Illustration or example (2)
			(4)

PART C			
Answer any THREE questions from this section. Each question carries 8 marks			

12		Explain Buffering of blocks (8)
		   ● Definition and purpose (2)
		   ● Explanation of buffering techniques (4)
		   ● Examples or scenarios (2)
			(8)

13		Explain Data abstraction and schema architecture (8)
		   ● Explanation of data abstraction (2)
		   ● Discussion of schema architecture (3)
		   ● Examples or illustrations (3)
			(8)

14		Analyze the different types of database users, including end-users, application programmers, and database administrators. What are their respective roles and responsibilities in the database environment? (8) ● Discussion of each type of user (3) ● Roles and responsibilities (3) ● Examples or scenarios (2)	
15		Analyze the components of an Entity-Relationship (ER) model and explain the purpose of each component using examples. (8) ● Explanation of ER model components (3) ● Purpose of each component (3) ● Examples illustrating each component (2)	
16		Compare and contrast role-based access control (RBAC), discretionary access control (DAC), and mandatory access control (MAC) models in terms of their suitability for distributed environments. (8) ● Comparison of RBAC, DAC, and MAC (3) ● Suitability analysis for distributed environments (3) ● Examples or scenarios (2)	(8)
		PART D (Compulsory Question)	
17		Develop an ER diagram for keeping track of information about a company database taking into account at least five entities. With a neat block diagram, represent the architecture of a typical DBMS required for the company. (10) ● ER diagram (5) ● Explanation of entities and relationships (3) ● DBMS architecture block diagram (2)	(10)

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