

**SCHEME OF EXAMINATION  
& SYLLABI**

of

**TWO YEAR MBA (EXECUTIVE) EVENING PROGRAMME**

**(Choice Based Credit System)**

**FROM THE ACADEMIC SESSION 2021-22**



**MDU-CENTRE FOR PROFESSIONAL & ALLIED STUDIES  
MAHARSHI DAYANAND UNIVERSITY ROHTAK (HARYANA)**

**MDU CENTRE FOR PROFESSIONAL AND ALLIED STUDIES  
MAHARSHI DAYANAND UNIVERSITY, ROHTAK**

**MBA EXECUTIVE EVENING PROGRAMME**

- 1. Course Title:** Two Year MBA Executive (Evening) Programme
- 2. Nodal Department:** MDUCPAS – Gurugram
- 3. Course Coordinator:** Department of Management, MDU-CPAS, Gurugram
- 4. Collaborating Departments within the University:** NIL
- 5. In partnership:** We are planning for industry Integration in next year
- 6. Course Description:** The MBA Executive Evening course will be a 2-year regular postgraduate management course designed for working professionals. The course will develop personal strengths, Management skill of working professionals aspiring to move to mid-level or senior-level management position.
- 7. Course Objectives**
  1. To equip students to analyse and synthesize information across disciplines in order to evaluate business opportunities and make sound business decisions.
  2. To enhance strategic & innovative thinking, key analysis skills to enable effective opportunity identification, problem solving and decision making
  3. To enhance Oral, Written and Presentation Communication Skills
  4. To enhance traits of Decision-Making, Team participation and Leadership.
- 8. Duration:** Two Year
- 9. Target Group:** The working professionals who want to continue education in management along with job. Target group is entry level to senior employee working in corporate and looking for enhancing their managerial skill.
- 10. Eligibility:** Graduate/Post graduation from any discipline with 45% marks. Candidate must be working with some corporate Entity/Establishment/PSU/Government organisation etc. or must have self-business enterprise.
- 11. Timing: Weekend/Evening/ Daytime:** Evening. (However, additional classes will be conducted on Sunday to make any loss of credit hours)
- 12. Online/Offline/Blend of the two/Content sharing and online/Any other:** Being a regular course Offline classes will be conducted physically in the MDU CPAS Campus. However online classes can also be conducted for the required papers/lectures
- 13. Assessment and Evaluation mode:** Descriptive as well as Practical Assessment
- 14. Fee structure:** Rs. 53,094/- Per annum
- 15. Intake:** Initially the intake of the course is 30.

**NEW SCHEM OF EXAMINATIONS**

**FOR**

**TWO YEAR MBA (EXECUTIVE) EVENING PROGRAMME FROM THE SESSION 2021-22**

| <b>FIRST YEAR: FIRST SEMESTER</b> |   |                       |                        |                                       |                    |                        |
|-----------------------------------|---|-----------------------|------------------------|---------------------------------------|--------------------|------------------------|
| <b>Course Code</b>                | <b>Title of the Course (s)</b>                    | <b>External Marks</b> | <b>Sessional Marks</b> | <b>External Evaluation/ Practical</b> | <b>Total Marks</b> | <b>Credits (L-T-P)</b> |
| 21IME21C1                         | Management Concepts and Organizational Behaviour  | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME21C2                         | Managerial Economics                              | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME21C3                         | Accounting for Managers                           | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME21C4                         | Business Statistics and Analytics                 | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME21C5                         | Operations Management                             | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME21C6                         | Workshop on Business Communication and Etiquettes | 50                    | -                      | 50                                    | 100                | 2-0-2                  |
| 21IME21C7                         | Workshop on Information Technology                | 50                    | -                      | 50                                    | 100                | 2-0-2                  |

| <b>FIRST YEAR: SECOND SEMESTER</b>   |                                |                       |                        |                                       |                    |                        |
|--|--------------------------------|-----------------------|------------------------|---------------------------------------|--------------------|------------------------|
| <b>Course Code</b>   | <b>Title of the Course (s)</b> | <b>External Marks</b> | <b>Sessional Marks</b> | <b>External Evaluation/ Practical</b> | <b>Total Marks</b> | <b>Credits (L-T-P)</b> |
| 21IME22C1  | Financial Management           | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME22C2  | Marketing Management           | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME22C3  | Human Resource Management      | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME22C4  | Business Research Methods      | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME22C5  | Operations Research            | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME22C6  | E-Commerce and Applications    | 50                    | -                      | 50                                    | 100                | 2-0-2                  |
| <b>Foundation Elective Course</b>  |                                |                       |                        |                                       |                    |                        |
| Each student will opt one course from the pool of Foundation Elective Courses provided by the University, excluding the Foundation Elective Course prepared by the Institute of Management Studies and Research. |                                |                       |                        |                                       |                    | 2                      |
| <b>Open Elective Course</b>  |                                |                       |                        |                                       |                    |                        |
| Each student will opt one course from the pool of Open Elective Courses provided by the University, excluding the Open Elective Courses prepared by the Institute of Management Studies and Research.            |                                |                       |                        |                                       |                    | 3                      |

**TWO YEAR MBA (EXECUTIVE) EVENING PROGRAMME FROM THE SESSION 2022-23**

| <b>SECOND YEAR: THIRD SEMESTER</b>  |                                |                       |                        |                                       |                    |                        |
|---|--------------------------------|-----------------------|------------------------|---------------------------------------|--------------------|------------------------|
| <b>Course Code</b>  | <b>Title of the Course (s)</b> | <b>External Marks</b> | <b>Sessional Marks</b> | <b>External Evaluation/ Practical</b> | <b>Total Marks</b> | <b>Credits (L-T-P)</b> |
| 21IME23C1   | Strategic Management           | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME23C2   | Corporate Laws                 | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME23C3   | Minor Project                  | 50                    | -                      | 50                                    | 100                | 4                      |
|   | Specialisation 1               | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
|   | Specialisation 1               | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
|   | Specialisation 2               | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
|   | Specialisation 2               | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| <b>Open Elective Course</b>   |                                |                       |                        |                                       |                    |                        |
| Each student will opt one course from the pool of Open Elective Courses provided by the University, excluding the Open Elective Courses prepared by the Institute of Management Studies and Research. |                                |                       |                        |                                       |                    | 3                      |

| <b>SECOND YEAR: FOURTH SEMESTER</b> |                                |                       |                        |                                       |                    |                        |
|-------------------------------------|--------------------------------|-----------------------|------------------------|---------------------------------------|--------------------|------------------------|
| <b>Course Code</b>                  | <b>Title of the Course (s)</b> | <b>External Marks</b> | <b>Sessional Marks</b> | <b>External Evaluation/ Practical</b> | <b>Total Marks</b> | <b>Credits (L-T-P)</b> |
| 21IME24C1                           | CSR and Business Ethics        | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME24C2                           | Entrepreneurship               | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME 24C3                          | Project Report                 | 100                   | -                      | 100                                   | 200                | 8                      |
| 21IME 24C4                          | Comprehensive Viva-voce        |                       | -                      | 100                                   | 100                | 4                      |
|                                     | Specialisation 1               | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
|                                     | Specialisation 1               | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
|                                     | Specialisation 2               | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
|                                     | Specialisation 2               | 80                    | 20                     | -                                     | 100                | 3-1-0                  |

| <b>THIRD SEMESTER : HUMAN RESOURCE MANAGEMENT</b>   |                                      |                       |                        |                                       |                    |                         |
|---|--------------------------------------|-----------------------|------------------------|---------------------------------------|--------------------|-------------------------|
| <b>Discipline Specific Elective Courses (specialization areas offered under dual specialization scheme) The institute/ Department will offer any two papers from a specialization area. Specialization areas opted will remain same in IIIrd and IVth semester.</b> |                                      |                       |                        |                                       |                    |                         |
| <b>Course Code</b>  | <b>Title of the Course (s)</b>       | <b>External Marks</b> | <b>Sessional Marks</b> | <b>External Evaluation/ Practical</b> | <b>Total Marks</b> | <b>Credits (L-T- P)</b> |
| 21IME23EH1  | Compensation and Benefits Management | 80                    | 20                     | -                                     | 100                | 3-1-0                   |
| 21IME23EH2  | Strategic Human Resource Management  | 80                    | 20                     | -                                     | 100                | 3-1-0                   |
| 21IME23EH3  | Human Resource Metrics and Analytics | 80                    | 20                     | -                                     | 100                | 3-1-0                   |

| <b>THIRD SEMESTER : FINANCE</b> |   |                       |                        |                                       |                    |                         |
|---------------------------------|---|-----------------------|------------------------|---------------------------------------|--------------------|-------------------------|
| <b>Course Code</b>              | <b>Title of the Course (s)</b>                | <b>External Marks</b> | <b>Sessional Marks</b> | <b>External Evaluation/ Practical</b> | <b>Total Marks</b> | <b>Credits (L-T- P)</b> |
| 21IME 23EF1                     | Indian Financial System and Financial Markets | 80                    | 20                     | -                                     | 100                | 3-1-0                   |
| 21IME 23EF2                     | Project Management                            | 80                    | 20                     | -                                     | 100                | 3-1-0                   |
| 21IME 23EF3                     | Investment Management                         | 80                    | 20                     | -                                     | 100                | 3-1-0                   |

| <b>THIRD SEMESTER : INFORMATION TECHNOLOGY MANAGEMENT</b> |                                   |                       |                        |                                       |                    |                         |
|---|-----------------------------------|-----------------------|------------------------|---------------------------------------|--------------------|-------------------------|
| <b>Course Code</b>  | <b>Title of the Course (s)</b>    | <b>External Marks</b> | <b>Sessional Marks</b> | <b>External Evaluation/ Practical</b> | <b>Total Marks</b> | <b>Credits (L-T- P)</b> |
| 21IME 23ET1   | E-Governance and Framework of ICT | 80                    | 20                     | -                                     | 100                | 3-1-0                   |
| 21IME 23ET2   | Data Ware Housing and Data Mining | 80                    | 20                     | -                                     | 100                | 3-1-0                   |
| 21IME 23ET3   | Enterprise Resource Planning      | 80                    | 20                     | -                                     | 100                | 3-1-0                   |

| <b>THIRD SEMESTER : MARKETING MANAGEMENT</b> |                                  |                       |                        |                                       |                    |                         |
|--|----------------------------------|-----------------------|------------------------|---------------------------------------|--------------------|-------------------------|
| <b>Course Code</b>                           | <b>Title of the Course (s)</b>   | <b>External Marks</b> | <b>Sessional Marks</b> | <b>External Evaluation/ Practical</b> | <b>Total Marks</b> | <b>Credits (L-T- P)</b> |
| 21IME23EM1                                   | Service Marketing                | 80                    | 20                     | -                                     | 100                | 3-1-0                   |
| 21IME23EM2                                   | Customer Relationship Management | 80                    | 20                     | -                                     | 100                | 3-1-0                   |
| 21IME23EM3                                   | Consumer Behaviour               | 80                    | 20                     | -                                     | 100                | 3-1-0                   |

| <b>THIRD SEMESTER : OPERATIONS MANAGEMENT</b> |                                       |                |                 |                                 |             |                 |
|---|---------------------------------------|----------------|-----------------|---------------------------------|-------------|-----------------|
| Course Code                                   | Title of the Course (s)               | External Marks |                 |                                 | Total Marks | Credits (L-T-P) |
|   |                                       |                | Sessional Marks | External Evaluation / Practical |             |                 |
| 21IME23EO1                                    | Project Management                    | 80             | 20              | -                               | 100         | 3-1-0           |
| 21IME23EO2                                    | Total Quality Management              | 80             | 20              | -                               | 100         | 3-1-0           |
| 21IME23EO3                                    | Supply Chain and Logistics Management | 80             | 20              | -                               | 100         | 3-1-0           |

| <b>THIRD SEMESTER : BUSINESS ANALYTICS</b> |                               |                |                 |                                 |             |                 |
|--|-------------------------------|----------------|-----------------|---------------------------------|-------------|-----------------|
| Course Code                                | Title of the Course (s)       | External Marks | Sessional Marks | External Evaluation / Practical | Total Marks | Credits (L-T-P) |
| 21IME23EB1                                 | Business Analytics            | 80             | 20              | -                               | 100         | 3-1-0           |
| 21IME23EB2                                 | Fundamental of Econometrics   | 80             | 20              | -                               | 100         | 3-1-0           |
| 21IME23EB3                                 | Predictive Business Analytics | 80             | 20              | -                               | 100         | 3-1-0           |

| <b>FOURTH SEMESTER : HUMAN RESOURCE MANAGEMENT</b> |  |                |                 |                                 |             |                 |
|--|--|----------------|-----------------|---------------------------------|-------------|-----------------|
| Course Code  | Title of the Course (s)                    | External Marks | Sessional Marks | External Evaluation / Practical | Total Marks | Credits (L-T-P) |
| 21IME24EH1   | Managing Interpersonal and Group Processes | 80             | 20              | -                               | 100         | 3-1-0           |
| 21IME24EH2   | Training and Development                   | 80             | 20              | -                               | 100         | 3-1-0           |
| 21IME24EH3   | International Human Resource Management    | 80             | 20              | -                               | 100         | 3-1-0           |

| <b>FOURTH SEMESTER : FINANCE</b> |                                     |                |                 |                                |             |                  |
|----------------------------------|-------------------------------------|----------------|-----------------|--------------------------------|-------------|------------------|
| Course Code                      | Title of the Course (s)             | External Marks | Sessional Marks | External Evaluation/ Practical | Total Marks | Credits (L-T- P) |
| 21IME24EF1                       | Management of Financial Services    | 80             | 20              | -                              | 100         | 3-1-0            |
| 21IME24EF2                       | Financial and Commodity Derivatives | 80             | 20              | -                              | 100         | 3-1-0            |
| 21IME24EF3                       | Financial Decision Analysis         | 80             | 20              | -                              | 100         | 3-1-0            |

| <b>FOURTH SEMESTER : INFORMATION TECHNOLOGY MANAGEMENT</b> |   |                       |                        |                                       |                    |                        |
|--|---|-----------------------|------------------------|---------------------------------------|--------------------|------------------------|
| <b>Course Code</b>   | <b>Title of the Course (s)</b>            | <b>External Marks</b> | <b>Sessional Marks</b> | <b>External Evaluation/ Practical</b> | <b>Total Marks</b> | <b>Credits (L-T-P)</b> |
|  |   |                       | 21IME24ET1             | Information Security and Cyber Laws   |                    |                        |
| 21IME24ET2   | E-Business Information Systems Management | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME24ET3   | Systems Analysis and Design               | 80                    | 20                     | -                                     | 100                | 3-1-0                  |

| <b>FOURTH SEMESTER : MARKETING MANAGEMENT</b> |                                   |                       |                        |                                       |                    |                        |
|---|-----------------------------------|-----------------------|------------------------|---------------------------------------|--------------------|------------------------|
| <b>Course Code</b>                            | <b>Title of the Course (s)</b>    | <b>External Marks</b> | <b>Sessional Marks</b> | <b>External Evaluation/ Practical</b> | <b>Total Marks</b> | <b>Credits (L-T-P)</b> |
|   |                                   |                       | 21IME24EM1             | Integrated Marketing Communications   |                    |                        |
| 21IME24EM2                                    | Product and Brand Management      | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME24EM3                                    | Sales and Distribution Management | 80                    | 20                     | -                                     | 100                | 3-1-0                  |

| <b>FOURTH SEMESTER : OPERATIONS MANAGEMENT</b> |                                |                       |                        |  |                    |                        |
|--|--------------------------------|-----------------------|------------------------|--|--------------------|------------------------|
| <b>Course Code</b>                             | <b>Title of the Course (s)</b> | <b>External Marks</b> | <b>Sessional Marks</b> | <b>External Evaluation/ Practical</b>      | <b>Total Marks</b> | <b>Credits (L-T-P)</b> |
|  |                                |                       | 21IME24EO1             | Warehouse Management and Inventory Control |                    |                        |
| 21IME24EO2                                     | Supply Chain Analytics         | 80                    | 20                     | -  | 100                | 3-1-0                  |
| 21IME24EO3                                     | Technology Management          | 80                    | 20                     | -  | 100                | 3-1-0                  |

| <b>FOURTH SEMESTER : BUSINESS ANALYTICS</b> |                                 |                       |                        |                                       |                    |                        |
|---|---------------------------------|-----------------------|------------------------|---------------------------------------|--------------------|------------------------|
| <b>Course Code</b>                          | <b>Title of the Course (s)</b>  | <b>External Marks</b> | <b>Sessional Marks</b> | <b>External Evaluation/ Practical</b> | <b>Total Marks</b> | <b>Credits (L-T-P)</b> |
|   |                                 |                       | 21IME24EB1             | Applied Multivariate Analysis         |                    |                        |
| 21IME24EB2                                  | Market Microstructure           | 80                    | 20                     | -                                     | 100                | 3-1-0                  |
| 21IME24EB3                                  | Economics for Business Strategy | 80                    | 20                     | -                                     | 100                | 3-1-0                  |

### SPECIALIZATION GROUPS FOR MBA (EXECUTIVE) EVENING PROGRAM

**Note:** - Students have to opt for any two specialization areas from given three groups, selecting not more than one specialization from one Group. Minimum of ten students are required for offering any specialization area from any two groups.

| Group 1              | Group 2            | Group 3                |
|----------------------|--------------------|------------------------|
| HRM                  | Marketing          | Finance                |
| Operation Management | Business Analytics | Information Technology |

**Note:**

1. **The duration of the end term examination shall be 3 hours.**
2. The Criteria for awarding internal assessment of 20 marks shall be as under:
  - a) Class test : 10 marks.
  - b) Assignment and Presentation : 5 marks
  - c) Attendance : 5 marks

|               |           |
|---------------|-----------|
| Less than 65% | : 0 marks |
| Upto 70%      | : 2 marks |
| Upto 75%      | : 3 marks |
| Upto 80%      | : 4 marks |
| Above 80%     | : 5 marks |
3. Students are required to choose FOUR optional papers, from ANY TWO specializations (two papers from each specialization).
4. The students of third semester will be required to complete Minor Project topic to be allotted by the Functional Head of the organization and Faculty concerned. The project report will be submitted by the candidates three weeks before the commencement of semester examinations and the same will be evaluated by internal and external examiner (50 each examiner).
5. The Project Report shall carry 200 marks which will be evaluated by Internal & the External examiners (100 each examiner) on the basis of the following criteria/break-up of marks: -
  - a. Contents & Layout of the Report 20
  - b. Conceptual Framework 20
  - c. Objectives & Methodology 15
  - d. Data Presentation & Analysis 20
  - e. Implications & Conclusions 15
  - f. Bibliography 10
  - g. Total 100



## **FIRST YEAR: FIRST SEMESTER**

### **Management Concepts and Organizational Behaviour**

**Course Code: 21IME21C1**

External Marks: 80

Internal Marks: 20

Time Allowed: 3 Hours

#### **Course Outcomes**

After completing the course students would be able to:

- CO1. Analyse the behaviour of individuals and groups in organizations in terms of the key factors that influence organizational behaviour.
- CO2. Identify the core competencies, managerial roles and significance of emotional intelligence at work.
- CO3. Assess the potential effects of organizational factors on organizational behaviour.
- CO4. Explain the organizational culture and describe its dimensions and to examine various organizational designs
- CO5. Assess organization and classify the contributing disciplines, approaches to OB and understanding challenges and opportunities for OB.
- CO6. Apply motivational and leadership theories to resolve problems of employee absenteeism, turnover, stress, job satisfaction, job performance and organizational commitment.

#### **UNIT- I**

Nature, Scope and Evolution of Management, Functions, Skills, Roles of Management. Managerial Competencies, Core competencies, Emotional intelligence at work place, Dynamics in social Milieu.

#### **UNIT- II**

Motivation: Nature and Theories; Content and Process Theories Leadership: Nature and Theories: Trait, Behavioural and Contingency approach, Leadership development for learning organizations.

#### **UNIT- III**

Foundations and Background of Organizational Behaviour, Interpersonal: Group Behaviour, Dynamics Formation and stages, Team building and Intrapersonal process: Attitude, Personality, Perception.

#### **UNIT- IV**

Organizational process and structure: Work Innovation and Job design, Organization climate and culture, Organization change and development and control.

#### **Recommended Readings:**

1. Robbins, S.P. and Decenzo, D.A. Fundamentals of Management, Pearson Education
2. Hellreigel, Management, Thomson Learning, Bombay
3. Koontz, H and Wechrich, H; Management, Tata McGraw Hill
4. Stoner, J et. al, Management, Pearson Education
5. Robbins and Coulter, Management, Pearson Education
6. Pravin Durai, Principles of Management, Pearson Education.
7. Satya Raju, Management – Text and Cases , PHI, NewDelhi
8. Richard L. Daft, Management, Thomson South-Western
9. Nelson, Debra L and James C Quick, Organizational Behaviour, Thomson Learning
10. Hellgiegel, D and J.W. Slocum, Organizational Behaviour, Thomson Learning
11. Luthans, Fred, Organizational Behaviour, McGraw Hill, New York
12. New Storm and Keith Davis, Organization Behaviour , TMH, New Delhi

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

**Managerial Economics**  
**Course Code: 21IME21C2**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

**Course Outcomes**

After completing the course students would be able to:

- CO1. Define the basic elements of managerial economic aspects of firm.
- CO2. Forecast demand for a product.
- CO3. Know what to produce, where to, when to, how to, for whom to produce.
- CO4. Frame policy for production to minimize the cost and maximum the profit.
- CO5. Construct the cost function.

**UNIT-I**

Nature and scope of managerial economics; nature of marginal analysis; alternative objectives of business firms; cardinal utility theory; indifference curve technique and the theory of consumer choice; consumer surplus; price, income and substitution effects; demand elasticity; demand estimation and forecasting; relationship between price elasticity and marginal revenue.

**UNIT-II**

Law of variable proportions; laws of return; optimal input combination; output-cost relations; engineering cost curves; technological change and production decisions; revenue curves of a firm; price-output decisions under alternative market structures; shut-down points; Baumol's sales maximization model; advertising and price-output decisions.

**UNIT-III**

Product differentiation; price-output decision in multi-plant and multi-product firms; general pricing strategies; special pricing techniques – limit pricing, peak load pricing and transfer pricing; dumping analysis; pricing of public utilities.

**UNIT-IV**

Risk analysis; investment and capital replacement decisions; locational choice of a firm; measures of national income; business cycles; operative aspects of macroeconomic policies; inflation analysis; tariff analysis.

**Recommended Readings:**

1. Hirschey, Mark, Managerial Economics, Thomson Learning, Bangalore
2. V. Agarwal, Managerial Economics, Pearson Education.
2. Monroe, Kent B., Pricing-Making Profitable Decisions, McGraw-Hill, New York
3. Keat, Paul B., and Philip K.Y. Young, Managerial Economics – Economic Tools for Today's Decision Makers, Pearson Education
4. Salvatore, Domini

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Accounting for Managers**

### **Course Code: 21IME21C3**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After completing the course students would be able to:

- CO1. Understand and apply accounting concepts, principles and conventions for their routine monetary transaction;
- CO2. Recognize circumstances providing for increased exposure to fraud and define preventative internal control measures.
- CO3. Create and prepare financial statements in accordance with Generally Accepted Accounting Principles
- CO4. Analyze, interpret and communicate the information contained in basic financial statements and explain the limitations of such statements.

#### **UNIT-I**

Accounting- Meaning, types, objectives and users of accounting system, Accounting principles- concepts and conventions, accounting cycle-journalization, posting to ledger accounts, preparation of trial balance and final accounts. An overview of IFRS and accounting standards (AS) in India

#### **UNIT-II**

Depreciation accounting for fixed assets- objectives, factors affecting depreciation and methods, financial statement analysis- ratio analysis, fund flow analysis and cash flow statement analysis.

#### **UNIT-III**

Reporting of financial performance- Disclosure in corporate financial reports and their importance, Budgetary control- Budget, budgeting and budgetary Control, classification of budget and preparation, importance and limitations of budgetary control.

#### **UNIT-IV**

Marginal Costing and analysis- contribution, break-even point, profit-volume ratio, margin of safety and their applications in managerial decision making, Balanced scorecard- a tool of interactive control.

#### **Recommended Readings:**

1. Dhamija, S. Financial Accounting for Managers, Pearson Education.
2. P.C Tulsian, Financial Accounting, Pearson Education.
3. Horngren/Sundem- Introduction to Management Accounting, Pearson Education.
4. Khatri, K. Dhanesh, Financial Accounting, McGraw Hill Education.
5. Ramachandran, N. andKakani, R.K. Financial Accounting for Management, McGraw Hill Education.
6. Bhattacharya, S.K, Accounting for Management: Text and Cases, Vikas Publishing House.
7. Khan, M. Y and Jain, P.K Management Accounting, McGraw Hill Education.
8. Horngren, Charles T., Sundem, Gary L., Elliott, John. A and Philbrick, Donna, Introduction to Financial Accounting, Pearson Education. -
9. Narayanaswamy, R., Financial Accounting - A Managerial Perspective, PHI Learning.
10. Gupta, Ambrish, Financial Accounting for Management: An Analytical Perspective, Pearson Education.
11. Anthony, Robert N. etal. Accounting: Text and cases, McGraw Hill Education.
12. Shah: Management Accounting, Oxford University Press. '
13. Hansen, D.R. andM owen, M.M., Management Accounting, Thomson South western.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

**Business Statistics and Analytics**  
**Course Code: 21IME21C4**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

**Course Outcomes**

After completing the course students would be able to:

- CO1. Gain knowledge of basic concept / fundamentals of business statistic.
- CO2. Develop practical understanding of various statistical concepts.
- CO3. Compute various measures of central tendency, measures of Dispersion, Time Series Analysis, Index
- CO4. Number, Correlation and Regression analysis and their implication on Business performance.
- CO5. Understand basic concepts of probability and judge probability theoretical distributions
- CO6. Take managerial decision and applying the Concept of Business Analytics.

**UNIT- I**

Definition, role and application. Measures of central tendencies and their application. Measures of dispersion: range, quartile deviation, standard deviation, coefficient of variance and mean deviation. Skewness and kurtosis.

**UNIT- II**

Correlation: meaning and type of correlation - positive correlation, negative correlation, linear and non-linear correlation. Scatter diagram, Karl Pearson's coefficient of correlation, properties of correlation coefficient, probable error of correlation coefficient. Multiple and partial correlation coefficient.

Regression: Meaning and types- simple and multiple regression, linear and non-linear regression, regression lines, and properties of regression.

**UNIT- III**

Time Series: introduction, objectives and identification of trends – variation in time series, secular variation, cyclical variation, seasonal variation and irregular variation. Methods of estimation of trends- moving average and least square method. Index number: definition, uses, types, simple aggregate method and weighted aggregate method- Laspeyre's, Paasche's, Fisher's and CPI. Construction of index numbers and their uses.

**UNIT- IV**

Sampling: meaning and basic sampling concept, sampling and non-sampling errors Hypothesis testing: formulation and procedure for testing a hypothesis. Large and small sample test- z, t, F test and ANOVA (one way). Non-parametric test: chi-square test, sign test, Kruskal–Wallis test. Concept of Business Analytics-Meaning, types and application of Business Analytics.

**Recommended Readings:**

1. Levin, R.I. and Rubin D.S., Statistics for Management, Pearson Education.
2. Gupta, S.P. and Gupta, M.P., Business Statistics, Sultan Chand and Sons.
3. Sharma, J.K., Business Statistics, Vikas Publication House Pvt. Ltd.
4. Bajpai, Naval, Business Statistics, Pearson Education.
5. Davis and Pecar: Business Statistics using Excel, Oxford University Press.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## Operations Management

### Course Code: 21IME21C5

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### Course Outcomes

After completing the course students would be able to:

- CO1. Understand the role of Operations in overall Business Strategy of the firm.
- CO2. Understand the application of operations management policies and techniques to the service sector as well as manufacturing firms.
- CO3. Identify and evaluate the key factors and their interdependence of these factors in the design of effective operating systems.
- CO4. Understand the trends and challenges of Operations Management in the current business environment.
- CO5. Apply the techniques for effective utilization of operational resources and managing the processes to produce good quality products and services at competitive prices.

#### UNIT-I

Introduction to operations Management: Objectives, Functions and Scope, types of production systems, operations strategy; Facility Planning, Factors Affecting Plant location and plant layout; Tools and Techniques used for Plant Layout Planning.

#### UNIT-II

Production Planning and Control Process Planning, Aggregate Production Planning, Capacity Planning: Introduction, Capacity Planning; Product Design, and Development; Project Scheduling, Network Diagrams, Critical Path Method (CPM), Critical Path Method: Problems, Critical Path Method: Problems. Program Evaluation and Review Technique (PERT), Sales forecasting, Forecasting syst Qualitative and Quantitative methods.

#### UNIT-III

Materials Management - Concepts, Objectives, Functions, Materials Requirement Planning (MRP)-I, Materials Requirement Planning (MRP)-II Purchasing Management - Objectives; Functions; Methods; Procedure Management - Types of Stores; Functions; Coding Methods. Value Analysis - Concepts Inventory Management - Objectives, Factors, Process, Inventory control techniques- ABC, VED, EOQ, SED, FSN analysis. Maintenance Management - Concepts; Objectives; Functions; Types of Maintenance

#### UNIT- IV

Quality management: Introduction; Meaning, Concept of Quality, Total Quality Management (TQM), Total Productive Maintenance (TPM), Statistical Quality Control (SQC), concept of Six Sigma and its application; Advanced Manufacturing Technologies: Just in Time (JIT), KANBAN System, Enterprise Resource Planning (ERP), TOC, Lean/ Green Manufacturing, WCM etc. and safety concepts.

#### Recommended Readings:

1. R. Paneerselvam, Production and Operations Management; PHI; New Delhi
2. Mahadevan, B.; Operations Management - Theory and Practice; Pearson Education
3. Bedi, Production and Operations Management, 2/e, Oxford University Press.
4. K. N. Dervitsiotis, Operation Management, McGraw-Hill International Company.
5. Jay Heizer and B. Render, Operation Management, Pearson Education
6. Gaither, Norman and Frazier, Greg; Operations Management; Thomson Learning; NewDelhi
7. Krajewski, Lee J. and Ritzman, Larry P.; Operations Management - Processes and Value Chains; Pearson Education

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## Workshop on Business Communication and Etiquette

**Course Code: 21IME21C6**

External Marks: 50  
Practical Marks: 50  
Time Allowed: 3 hours

### **Course Objectives**

After completing the course students would be able to:

CO1: Describe the basics of communication and its process, elements, importance and different etiquettes.

CO2: Understand the importance and usage of presentation skills.

CO3: Learn about different behavioral skills.

CO4: Hold business meetings and will also learn about dining etiquettes of different countries.

### **UNIT -I**

Communication Skills – Concept, characteristics and process of communication; 7C's of communication; listening skills, verbal communication, body language, art of meeting and greeting, making effective conversation voice tone and eye contact, telephone etiquette, e-mail, voice mail etiquette, ways to deal with difficult people, extending, accepting and declining invitations

### **UNIT-II**

Presentation Skills – Difference between speech and presentation; handling of presentation audience questions, holding meetings, group discussion and interviews; structuring a presentation, delivering the presentation; situational presentation

### **UNIT-III**

Behavioural Skills – Positive attitude, self management, problem solving skills, time management skills, anger management, coping skills, assertiveness team building skills

### **UNIT-IV**

Business Meetings and Dining Etiquette – Attending business functions, etiquette in meetings, business socialization, organizing social events for business, dining manners, banquet etiquette Global Manners – Importance of awareness of international customs, cultural taboos and practices, traveling etiquette, business etiquette in USA, Europe, Africa, Middle East, Latin America

### **SUGGESTED READINGS:**

1. Kaul, Asha, The Effective Presentation, Response Books, New Delhi
2. Fox, She, Business Etiquette for Dummies, Wiley Publishing inc.
3. Chaney, Lillian and Janette Martin, The Essential Guide to Business Etiquette, Praeger, London
4. Sanghi, Seema, Towards Personal Excellence, Response Books, New Delhi
5. Dresser, Norine, Multicultural Manners, John Wiley & Sons Inc.
6. Langford, Beverly Y., The Etiquette Edge, AMACOM

**Instructions for External Examiner:** The question paper shall be divided in two sections. **Section 'A'** shall comprise of five short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. **Section 'B'** shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## Workshop on Information Technology

### Course Code: 21IME21C1

External Marks: 50  
Practical Marks: 50  
Time Allowed: 3 hours

#### Course Outcomes

After completing the course students would be able to:

- CO1. Understand computer hardware, software and computer applications, computer network, internet and office automation tools in business.
- CO2. Learn applications of MS Office and Internet in businesses.
- CO3. Demonstrate the ease to work with MS Word and explain the fundamentals of MS Excel and manipulate various functions and commands;
- CO4. Elucidate the need of MS PowerPoint, design & templates and manipulate records, creating records and web designing using PPT.
- CO5. Creating the databases and handling operations on the data using MS Access.

#### UNIT-I

Introduction to Computers: Characteristics, capabilities, limitations and applications of computers; types of computers; computer hardware, software; block diagram of computer and overview of working; types of computer language; generation of computer languages; functions and types of operating system

#### UNIT-II

Internet: Internetworking, Concepts, Internet Protocol Addresses, WWW Pages & Browsing, Security, Internet Applications, Analog and Digital Signals, Bandwidth, Network Topology, Packet Transmission, Long Distance communication, E-mail.

#### UNIT-III

Documentation using MS-Word – Creating and Editing Document, Formatting Document, Auto-text, Autocorrect, Spelling and Grammar Tool, Document Dictionary, Page Formatting, Bookmark, Advance Features of MS-Word- Mail Merge, Printing Electronic Spread Sheet using MS-Excel - Introduction to MS-Excel, Creating and Editing Worksheet, Formatting and Essential Operations, Formulas and Functions, Charts

#### UNIT-IV

Presentation using MS-PowerPoint: Presentations, Creating Manipulating and Enhancing Slides, Organizational Charts, Excel Charts, Word Art, Layering Art Objects, Animations and Sounds  
Introduction to database: Concept, Characteristics, Objectives, Advantages and limitations, entity, attribute, schema, subschema; Database management using MS-Access.

#### Recommended Readings:

1. Microsoft Office Complete Reference. BPB Publication.
2. Rajaraman V. (Feb. 2010). Fundamentals of Computers. PHI.
3. Sinha P.K. (2004). Computer Fundamentals. BPB Publication
4. Stultz, Russell A. Learn Microsoft Office. BPB Publication.
5. Taxali, Ravi Kant. (2014). Computer Course windows 7 and Office 2010. India: McGraw Hill Education.
6. Saxena, Computer Applications in Management, Vikas Publication, New Delhi
7. B. Ram, Computer Fundamentals, New Age Publications, New Delhi

**Instructions for External Examiner:** The question paper shall be divided in two sections. **Section 'A'** shall comprise of five short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. **Section 'B'** shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## FIRST YEAR: SECOND SEMESTER

### Financial Management Course Code: 21IME22C1

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### Course Outcomes

After completing the course students would be able to:

- CO1. Describe about various financial management concepts.
- CO2. Apply the concept of time value of money.
- CO3. Categorize and analyze different capital budgeting techniques.
- CO4. Appraise different project proposals for decision-making.
- CO5. Estimate cost of capital for long term source of finance.

#### UNIT-I

Financial management-scope finance functions and its organization, objectives of financial management; time value of money; sources of long term finance.

#### UNIT-II

Investment decisions importance, difficulties, determining cash flows, methods of capital budgeting; risk analysis (risk adjusted discount rate method and certainty equivalent method); cost of different sources of raising capital; weighted average cost of capital.

#### UNIT-III

Capital structure decisions-financial and operating leverage; capital structure theories - NI, NOI, traditional and MM theories; determinants of dividend policy and dividend models -Walter, Gordon and MM models.

#### UNIT-IV

Working Capital- meaning, need, determinants; estimation of working capital need; management of cash, inventory and receivables.

**Note:** The topic of capital budgeting, management of cash, inventory management, and receivable management will cover theoretical concepts and simple numerical questions.

#### Recommended Readings:

1. Pandey, I.M., Financial Management, Vikas Publishing House, New Delhi
2. Khan M.Y, and Jain P.K., Financial Management, Tata McGraw Hill, New Delhi
3. Berk, De Marzo, Harford, Fundamental of Corporate Finance, Pearson Education.
4. Chandra, Prasanna, Financial Management, TMH, New Delhi
5. Van Horne, James C., Financial Management and Policy, Pearson Education
6. Brigham and Houston, Fundamentals of Financial Management, Thomson Learning, Bombay.
7. Kishore, R., Financial Management, Taxman's Publishing House, New Delhi

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.



## **Marketing Management**

### **Course Code: 21IME22C2**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After completing the course students would be able to:

- CO1. Understand the marketing concepts and its evolution
- CO2. Analyze the market based on segmentation, targeting and positioning
- CO3. Know the consumer Behaviour and their decision making process
- CO4. Make decisions on product, price, promotion mix and distribution
- CO5. Understand the rural markets and the contemporary issues in marketing

#### **UNIT -I**

Introduction to marketing: Nature, scope, core concepts, tasks of marketing management, and corporate orientation towards marketplace; marketing environment; marketing research and information system; developing marketing strategy and plan; ethical issues in marketing.

#### **UNIT -II**

Understanding consumer and business markets: Consumer buying decision process in consumer and business markets; building customer value, satisfaction and loyalty; managing customer relations; Market segmentation, targeting and positioning approaches to deal with market competition; tools of product differentiation.

#### **UNIT -III**

Product and pricing decisions: Product life cycle, product mix and product line decisions, new product development process; branding, packaging and labelling decisions; pricing objectives, determinants of price, pricing methods and strategies.

#### **UNIT -IV**

Promotion and distribution decisions: Promotion mix - Advertising and sales promotion; public relations; personal selling; Channels of distribution: functions of intermediaries, channel design decisions, selecting channel members, channel management; wholesaling and retailing.

Contemporary marketing trends and issues: Globalization, consumerism, green marketing, digital marketing; evaluation and control of marketing effort; reasons for and benefits of going international; entry strategies in international marketing.

#### **Recommended Readings:**

1. Kotler Philip and Keller; Marketing Management, Pearson Education, New Delhi
2. Kotler, Philip, Kevin Keller, A. Koshy and M. Jha, Marketing Management in South Asian Perspective, Pearson Education, New Delhi
3. Kerin, Hartley, Berkowitz and Rudelius, Marketing, TMH, New Delhi
4. Etzel, Michael J, Marketing: Concepts and Cases, TMH, New Delhi
5. Dhunna, Mukesh, Marketing Management – Text and Cases, Wisdom Publications, New Delhi
6. Capon, Noel and Singh Siddharth; Managing Marketing-An Applied Approach, Wiley Publications, New Delhi

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## Human Resource Management

### Course Code: 21IME22C3

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### Course Outcomes

After completing the course students would be able to:

- CO1. Discuss the history and evolution of HRM.
- CO2. Explain the importance of HRM in the organizations through their roles & responsibilities, challenges etc.
- CO3. Assess the major HRM functions and processes of HRM planning, job analysis and design, recruitment, selection, training and development, compensation and benefits, and performance appraisal
- CO4. Identify strategic HR planning and the HRM process to the organization's strategic management and decision making process.
- CO5. Explain how training helps to improve the employee performance.

#### UNIT-I

Strategic importance of HRM; objectives of HRM; challenges to HR professionals; role, responsibilities and competencies of HR professionals; HR department operations; human resource planning– objectives and process; human resource information system, contemporary issues in human resource management

#### UNIT-II

Talent acquisition: recruitment and selection strategies, career planning and management, succession planning, socialization and induction of new employees; training and development, investment in training, training need assessment, designing and administering training programme; executive development programme, evaluation of T& D programme

#### UNIT-III

Appraising performance: developing and instituting performance appraisal system, assessment and development centers, potential appraisal; rewarding performance: linking rewards to organizational objectives, determine compensation structure, pay for performance and incentive plans, ESOP, executive compensation, designing and administering benefits and services

#### UNIT-IV

HR in knowledge era: HR in knowledge industry, HR in virtual organizations, HR in mergers and acquisitions, outplacement, outsourcing HR functions, employee leasing, HR audit, international HRM

#### Recommended Readings:

1. Dessler, Gary, Human Resource Management, Pearson Education
2. Ivancevich, John M., Human Resource Management , Tata McGraw Hill, New Delhi
3. Gomez. Megia, Luis, David Balkin, and Roberty Cardy, Managing Human Resources, Pearson Education
4. Mathis, Robert, and John Jackson, Human Resource Management, Thomson Learning Inc.
5. Shell, Scott and George Bohlander, Human Resource Management, Thomson Learning Inc.
6. Pattanayak, Biswajert, Human Resource Management, PHI, New Delhi
7. Jyothi P. and D.N.Venkatesh, Human Resource Management, Oxford University Press, New Delhi

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

**Business Research Methods**  
**Course Code: 21IME22C4**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

**Course Outcomes**

After completing the course students would be able to:

- CO1. Acquire knowledge on various kinds of research questions and research designs.
- CO2. Distinguish between qualitative, quantitative and mixed methods of research
- CO3. Relate ethical and philosophical considerations
- CO4. Design a good quantitative purpose statement and good quantitative research
- CO5. Understand good practices in conducting a qualitative interview and observation.

**UNIT-I**

Business research; its concept, nature, scope, need and managerial value of business research; components of theory – definitions, concepts, constructs, variables, hypothesis, process of research and structure of research proposal

**UNIT-II**

Research design – concept and types – exploratory, descriptive, diagnostic and experimental; sampling design; techniques, factors influencing sample size, measurement – concept, measurement scales – types and construction of scales and reliability and validity aspects in measurement

**UNIT-III**

Methods of data collection – questionnaire/schedule; questionnaire designing, interview and observational methods; data analysis and interpretation, editing, coding, content analysis and tabulation; hypothesis testing – an overview of parametric and non-parametric tests (Analysis of Variance, X test, Wilcoxon Matched – pairs signed– rank test, Mann – Whitney test, Kruskal– Wallis H-test)

**UNIT-IV**

An overview of dependent and interdependent methods (multiple regression, discriminant analysis, conjoint analysis, factor analysis, cluster analysis); ingredients and constructions of research report; procedure of preparation of reference and bibliography

**Recommended Readings:**

1. Naval Bajpai, Business Research Methods, Pearson Education
2. Zikmund, Millian G., Business Research Methods, Thomson Learning, Bombay
3. Cooper, Donald R- and Pamela Schindler, Business Research Methods, Tata McGraw Hills, New Delhi
4. Goode, Millian J. and Paul K. Hatl, Methods in Research, McGraw Hills, New Delhi
5. Sekran, Uma, Business Research Method, Miley Education, Singapore
6. Kothari, C.R., Research Methodology

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## Operations Research

### Course Code: 21IME22C5

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### Course Outcomes

After completing the course students would be able to:

- CO1. Apply research techniques in quantitative and qualitative aspects.
- CO2. Schedule the projects and find the early ways of finishing it.
- CO3. Develop simulation models.
- CO4. Minimize the resource allocation for project.
- CO5. Maximize the productivity with help of least cost techniques.

#### UNIT-I

Operations Research: Meaning, origin, scope and role in managerial decision making. Linear programming: Meaning, scope and limitations. Formulation of industrial and business problem as linear programming problems. Solution of linear programming problems by graphical and simplex methods. Degeneracy and duality in linear programming problems.

#### UNIT-II

Transportation Problems: Balanced and unbalanced cases, Initial basic feasible solution of transportation problems by N/W method, least cost entry method and Vogel's approximation method. Optimal solution of transportation problem by MODI and STEPPING STONE method. Degeneracy in transportation problem. Assignment problems including traveling salesman's problem. Special cases in assignment problems: unbalanced problems, maximization objective and multiple optimal solutions.

#### UNIT-III

PERT/CPM: Difference between PERT and CPM, network construction, calculating EST, EFT, LST, LFT and floats, probability considerations in PERT, time -cost trade-off. Decision theory: decision making under uncertainty and risk, Bayesian analysis, decision trees.

#### UNIT-IV

Game theory: meaning and types of games, types of strategies. Solution of games with saddle point and graphical method. Principle of dominance. Queuing theory: concept, assumptions and applications. Steady state solution of MM1 and MMK models. Poisson distributed arrivals and exponentially distributed service time models. Simulation: meaning, process, advantages, limitations and applications.

#### Recommended Readings:

1. Paneerselvam, Operations Research, PHI, N. Delhi.
2. Taha, Operations Research: An Introduction, Pearson Education.
3. Vohra, N.D.; Quantitative Techniques in Management; Tata McGraw Hill Publishing Company Ltd., New Delhi.
4. Kapoor, V.K., Operations Research; Sultan Chand and Sons, New Delhi.
5. Sharma, J.K., Operations Research: Theory and Applications, Macmillan India Ltd, New Delhi.
6. Kalavathy, Operations Research, Vikas Publishing House, New Delhi.
7. Natarajan, A.M, Operation Research, Pearson Education.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

**E-Commerce and Applications**  
**Course Code: 21IME22C6**

External Marks: 50  
 Internal Marks: 50  
 Time Allowed: 3 Hours

**Course Outcomes**

After completing the course students would be able to:

- CO1. Understand the concept of E-Commerce & describe the opportunities & challenges offered by E Commerce
- CO2. Able to handle electronic payment technology and requirements for internet based payments
- CO3. Understand the categories of E-Commerce and understand the different applications of E-commerce CO4. Understand and identify security issues of E-Commerce
- CO5. Understand the concept of WEB Based Business understand the M-Commerce applications

**UNIT- I**

Technology and Infrastructure for E-Commerce: Framework of E-commerce; Network Infrastructure for E-Commerce – Market Forces Influencing I-way, Network Access Equipment, Public Policy Issues Shaping the I-way; EDI - Applications in Business, Legal, Security and Privacy Issues of EDI; Components of EDI Standards, ASC X12 and EDIFACT.

**UNIT-II**

E-Commerce and Retailing: Changing Retail Industry Dynamics, Mercantile Models from the Consumer's Perspective, Management Challenges in Online Retailing. Intranets and Customer Asset Management: Basics of Customer Asset Management, Online Sales Force, Online Customer Service and Support, Technology and Marketing Strategy.

**UNIT-III**

Intranets and Manufacturing: Integrated Logistics, Agile Manufacturing, Emerging Business Requirements, Manufacturing Information Systems, Intranet-based Manufacturing, and Logistics Management. E-Commerce and Online Publishing: Why Online Publishing, Online Publishing approaches, Advertising and Online Publishing. E-Commerce and Banking: Changing Dynamics in the Banking Industry, Home Banking Implementation Approaches, and Management Issues in Online Banking.

**UNIT-IV**

Intranets and Corporate Finance: An Introduction, Financial Systems, Financial Intranets, Software Modules in Financial Information Systems, Human Resource Management Systems, Size/Structure of Financial Software Market.

**Lab:** Each student is required to develop at least one application of e-commerce.

**Recommended Readings:**

1. Kalakota and Whinston, Electronic Commerce: A Manager's Guide, Pearson Education.
2. Greenstien and Vasarhelyi, Electronic Commerce: Security, Risk Management and Control, Tata McGraw Hill.
3. Dave Chaffey, E-Business and E- Commerce Management, Strategy, Implementation and Practice, Pearson Education.

**Instructions for External Examiner:** The question paper shall be divided in two sections. **Section 'A'** shall comprise of five short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. **Section 'B'** shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## SECOND YEAR: THIRD SEMESTER

### Strategic Management Course Code: 21IME23C1

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### Course Outcomes

After completing the course students would be able to:

- CO1. Understand the overview of strategic management
- CO2. Analyze the internal and external environment, formulate strategic intent and understand the different levels of strategy.

#### UNIT-I

Introduction to Business Policy and Strategic Management: Definition, Concept, Objective and Significance, The levels at which strategy operates, Characteristic of Strategic Management, An Overview: Strategic Management Process, Concept of Strategic Decision Making. Defining strategic intent: Vision, Mission, Business definition, Goals and Objectives.

#### UNIT-II

Environment Appraisal: Concept and Environmental Sector; PEST Analysis, Organizational Appraisal: Concepts and Capability Factors; Porter's Value Chain Model, Framework for developing Strategic Advantage, SWOT Analysis as a Tool for assessing Organizational Capabilities and Environment Opportunities, Type of Strategies: Corporate Level (Concept of Grand Strategies), Business Level and Functional Level., Guidelines for Crafting Successful Business Strategies. Strategy Analysis and Choice: Corporate Level Strategy Analysis: BCG Matrix and GE 9 cell Matrix, Business Level Strategy Analysis: Life Cycle Analysis, Porter's Five Forces of Industry Analysis, Concept of Strategic Decision Making, Subjective Factors in Strategic Choice and Process of Strategic Choice

#### UNIT-III

Strategy Implementation: Interrelation Between Strategy Formulation and Implementation, Aspects of Strategy Implementation, An overview of Project, Procedural Implementation, Resource Allocation, Structural Implementation: An overview of: Structural Consideration, Structure for Strategies, Behavioural Implementation: An overview of: Leadership, Corporate Culture, Corporate Politics and Use of Power, Personal Values and Business Ethics, Functional /Operational Implementation: An overview of: Functional Strategies.

#### UNIT-IV

Strategy Evaluation and Control: An Overview of Strategic Evaluation and Control, Strategic Control and Operational Control, Techniques for Strategic Evaluation and Control, Role of Organizational Systems in Evaluation, McKinsey's 7s Framework.

#### Recommended Readings:

1. Kazmi, Azhar, "Business Policy and Strategic Management", TMH, New Delhi.
2. Wheelen and Hunger, Strategic Management and Business Policy, Pearson Education.
3. Chandrasekharan: Strategic Management, Oxford University Press.
4. A A Thompson Jr., A J Strickland III, J E Gamble, Crafting and Executing Strategy- The Quest for Competitive Advantage, Tata McGraw Hill.
5. David, Fred R. "Strategic Management-Concept and Cases", Pearson Education
6. Hitt, M.A., Ireland R.D. and Hos Kisson R.D., "Strategic Management Competitivenessand Globalization" Thomson Asia Pvt. Ltd.
7. Pearce II JA and Robinson Jr., R.B., "Strategic Management-Strategy Formulationand Implementation", AITBS Publishers and Distributors, Delhi.
8. Srivastava R.M. "Management Policy and Strategic Management (Concepts, Skills and Practices)", Himalayan Publishing House.
9. Peter F. Drucker, "Managing in a Time of Great Change", Truman Talley Books / Plume Penguin Group

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

**Corporate Laws**  
**Course Code: 21IME23C2**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

**Course Outcomes**

After completing the course students would be able to:

- CO1. Acquire a sound understanding of the legal aspects of the laws affecting businesses
- CO2. Apply basic legal knowledge to business transactions.
- CO3. Communicate effectively using standard business and legal terminology
- CO4. Analyze a given business context using basic understanding of the applicable Acts and develop a suitable operational framework.
- CO5. Describe current law, rules, and regulations related to settling business disputes

**UNIT-I**

Law of Contract- Introduction, kinds of contracts, offer and acceptance, consideration, capacity of parties, free consent, legality of object, performance of contracts, discharge of contract, remedies for breach of contract, indemnity and guarantee, bailment and pledge, agency.

**UNIT-II**

Law of Sale of Goods- Introduction, contract of sale of goods, conditions and warranties, transfer of property, performance of contract of sale, rights of unpaid seller; Law of Partnership- Introduction, formation, rights duties and liabilities of partners, dissolution of partnership firm, limited liability partnership; Law of Negotiable Instruments- Introduction, parties to negotiable instruments presentation, negotiation, dishonour and discharge.

**UNIT-III**

Nature and Administration of Companies Act 1956- Salient features, meaning and types of companies, formation of company, memorandum of association, articles of association, shares and share capital.

**UNIT-IV**

Company meetings and proceedings; Managerial remuneration; Power, duties and liabilities of directors; Winding up of company; Qualification and Statutory liabilities of company secretary; Corporate governance.

**Recommended Readings:**

1. Maheshwari, S.N. and S.K. Maheshwari; A Manual of Business Law, Himalaya Publishing House.
2. Kuchhal M.C., Modern Indian Law, Shree Mahavir Book Depot.
3. Kuchhal M.C., Business Law, Vikas Publishing House, New Delhi.
4. Kapoor, N.D., Elements of Mercantile Law, Sultan Chand and Sons, New Delhi.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Compensation and Benefits Management**

**Course Code: 21IME23EH1**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

### **Course Outcomes**

After completing the course students would be able to:

- CO1. Learn basic compensation concepts and the context of compensation practice.
- CO2. Understand skills in designing, analyzing and restructuring reward management systems, policies and strategies.
- CO3. Understand issues related to the compensation of human resources in organizations
- CO4. Learn implications for strategic compensation and possible employer approaches to managing legally require benefits

### **UNIT-I**

Compensation: concept, objectives, financial and non-financial compensation system. Economic and Behavioural theories of compensation. Compensation structure, job evaluation, approach to compensation management, significance of employee compensation, new trends in compensation management.

### **UNIT-II**

Wage and salary administration: theories of wage determination, types of wages, salary progression, wage boards and pay commissions. Pay for performance plans, incentive scheme: merits, demerits, types of incentive schemes, group incentive plans. Team based compensation: introduction, design of team based compensation.

### **UNIT-III**

Benefits and services: concept, classification of employee benefits, factors influencing benefits, competency based compensation, Executive compensation: introduction, components and executive compensation design. Compensation of special groups, Employee reward system in India.

### **UNIT-IV**

Strategic compensation management: strategic compensation design and policies, Legal framework of compensation, retirement plans, employee welfare and working conditions-statutory and voluntary measures. Taxation issues and employee compensation: tax implications of compensation, compensation and the Income Tax Act.

### **Recommended Readings:**

1. Singh, B.D., "Compensation Reward Management", Excel Books, New Delhi.
2. Bhattacharya, Deepak: Compensation Management, Oxford University Press.
3. Milkovich, George T and Newman J.M., "Compensation", Tata McGraw Hill, New Delhi
4. Henderson, R.I., "Compensation Management", Pearson Education.
5. Martocchio, J.J., "Strategic Compensation", Pearson Education.
6. Armstrong, M and Murlis H, "Reward Management", Kogan Page, UK.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.



## Strategic Human Resource Management

### Course Code: 21IME23EH2

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### Course Outcomes

After completing the course students would be able to:

- CO1. Understand strategic role performed by HR in business organization
- CO2. Understand the tools and techniques essential as a strategic contribution of HRM to organization growth.
- CO3. Explore the relationship between management of people and pursuit of an organization's strategic goals
- CO4. and objectives
- CO5. Understand the alignment of among different HR system and practices and organization outcomes

#### UNIT-I

Strategic HRM: introduction, components, objectives and evolution of SHRM, difference between traditional HRM and SHRM, Investment perspective of human resource management, challenges in SHRM, barriers to Strategic HR, SHRM approaches: The Indian Context.

#### UNIT-II

Human Resource Evaluation: concept, approaches, rationale for HR evaluation, linkage between HRM and firm performance, best practices and bundles approach, distinctive HR practices, HR outsourcing and off shoring, human resource planning: an overview, significance, perspectives and objectives of HRP, business strategy and HRP, process of HRP.

#### UNIT-III

HR systems: staffing systems, reward and compensation systems, employee and career development systems, performance management systems

#### UNIT-IV

Strategic options: downsizing and restructuring, outsourcing and off shoring, other HR practices/decisions

#### Recommended Readings:

1. Ekta Sharma, "Strategic Human Resource Management and Development, Pearson Education
2. Jeffrey A. Mello, "Strategic Human Resources Management", Cengage Learning
3. Tanuja Agarwala . "Strategic Human Resources Management", Oxford University Press.
4. Freed R.David, "Strategic Management", Pearson Education.
5. Robert L. Mathis and John H. Jackson. "Human Resource Management", Thomson South Western.
6. K. Prasad, "Strategic Human Resource Management - Text and Cases", MacMillan India Ltd.
7. Charles R.Greer, "Strategic Human Resource Management", Pearson Education
8. Srinivas R.Kandula, "Strategic Human Resource Development", PHI
9. Sharma, Anuradha. "Strategic Human Resource Management: An Indian perspective", Sage Response Books.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## Human Resource Metrics and Analytics

**Course Code: 21IME23EH3**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

### Course Outcomes

After completing the course students would be able to:

- CO1. Relate the importance of using data base reasoning to support the HR decisions
- CO2. Conduct detailed problem analysis assessment and generate decisions based on evidence rather than opinion.
- CO3. Understand the usefulness of HRM matrix and analytic at the work place.
- CO4. Align the people strategy with the business strategy in today's workforce Organization.

### UNIT -I

HR Analytics: Evolution of HRIS and HR Analytics. Types and Measures - HR Productivity Metrics and Human Capital Metrics. HR Analytics Maturity Model, CEO/ Managers - HR expectations on Analytics, understanding HR indicators, metrics and data, Data collection, tracking, entry. Relational databases and HR systems.

### UNIT-II

RM, Planning and implementing a new HRIS, Security and privacy considerations, Statistical analysis for HR (regression analysis, measures of central tendency) Graphs, tables, spreadsheets, data manipulation (using Excel).

### UNIT- III

Benchmarking and best practices, Staffing, Supply and demand forecasting, Total compensation analyses, Cost justification-return on investment, Communicating recommendations.

### UNIT -IV

Perspective of analytics in HR, Translator role, resistance to workforce analytics, emerging data sources, workforce analytics function, modelling in HR: descriptive and indicative models for employee retention and turnover.

### Recommended Readings:

1. Becker B.E., Huafelid M.A. and Ulrich D. "The HR Scorecard: Linking people, strategy, and performance", Harvard Business Review Press.
2. Nigel Guenole, Jonathan Ferrar, Sheri Feinzig, "The Power of People", Pearson Education
3. Sesil, "Applying Advanced Analytics to HR Management Decisions", 1e, Pearson Education.
4. Soundararajan, "Winning on HR Analytics", Sage Publication.
5. Bhattacharya, "HR Analytics: understanding Theory and Applications", Sage Publication.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## Indian Financial System and Financial Markets

### Course Code: 21IME23EF1

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### Course Outcomes

After completing the course students would be able to:

- CO1. Understand the working of financial institutions and markets both individually and as an interlinked system.
- CO2. Understand the factors affecting interest rates and yield curve and the importance of change in interest rates for all constituents of the financial system
- CO3. Understand the organization, role, functioning and need for regulation of different types of financial markets and the implications of the same on society.
- CO4. Critically analyze the pivotal role of banking in a financial system and the reasons for it being among the most tightly regulated industries in the world.
- CO5. Understand the impediments to financial inclusion and critically evaluate different ways of developing sustainable financial inclusion. Also critically analyze the working of the micro finance industry.

#### UNIT-I

Financial Syst Meanings, components and functions; reforms in Indian Financial System; Money Market and its segments.

#### UNIT-II

Capital Market- New issue market; Stock Exchange and its functions; trading in stock exchange; NSE; OTCEI; depositories and custodians; Role and Functions of SEBI; New Financial Instruments.

#### UNIT-III

Commercial Banks; RRBs; Development Banks; NBFCS; EXIM Bank, RBI.

#### UNIT-IV

LICI; UTI; SIDBI; NABARD; Micro Finance; Financial Inclusion;

#### Recommended Readings:

1. Suresh, P. and Paul. J., Management of Banking and Financial Services, Pearson Education
2. Khan, M.Y. Indian Financial System, Tata McGraw Hill
3. Clifford, G., Financial Markets, Institutions and Financial Services, PHI.
4. Khan, M.Y. Management of Financial Services, McGraw-Hill.
5. Gordan, E and K. Natrajan, Emerging Scenario of Financial Services. Himalaya Publishing House.
6. Khan, M.Y., Financial Institutions and Market, McGrawHill.
7. Bhole, L.M., Financial Institutions and Market, McGrawHill.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

**Project Management**  
**Course Code: 21IME23EF2**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

**Course Outcomes**

After completing the course students would be able to:

- CO1. Identify various investment opportunities and their evaluation
- CO2. Analytically approach to study the feasibility study of investment decisions
- CO3. Distinguish the key risks and to know means of finance
- CO4. Control and review the human aspects of the project

**UNIT-I**

Capital Investment- need, types, phases of capital budgeting, Generation and Screening of Project Ideas- corporate appraisal, monitoring the environment and identifying investment opportunities, scouting the project ideas and project rating, Market and Demand Analysis, Technical Analysis.

**UNIT-II**

Financial Estimates and Investment Appraisal Criteria- Estimation of investment, revenue and production cost, working capital requirement, Evaluation techniques of capital investment decisions.

**UNIT-III**

Project Risk Analysis- types of Risk, Risk adjusted discount rate method, certainty equivalent coefficient method, sensitivity analysis, decision tree analysis. Weighted average cost of capital (WACC) and its relevance in financial decision making, financing of projects, Project Appraisal by Financial institutions.

**UNIT-IV**

Social Cost Benefit Analysis (SCBA): Rationale for SCBA, UNIDO Approach. Project Management and Review: Forms of project Organization, project planning and control, human aspect of project management, pre-requisite for successful project implementation.

**Recommended Readings:**

1. Chandra, Prasanna. "Project Planning: Analysis, Selection, Implementation and Review" TMH.
2. Pradeep Pai, Project Management, Pearson Education.
3. Khatua: Project Management and Appraisal, Oxford University Press.
4. Nicholas, "Project Management for Business and Technology: Principles and Practice", Pearson
5. Ghattas, R.G. and McKee, S.L., "Practical Project Management", Pearson Education Asia
6. Pinto, P.K., "Project Management", Pearson Education.
7. K Nagarajan, "Project Management", New Age International Publishers.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Investment Management**

### **Course Code: 21IME23EF3**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After completing the course students would be able to:

- CO1. Understand the environment of investment and risk return framework.
- CO2. Analyse bonds in terms of valuation, yields and risks as well as build up immunized bond portfolio.
- CO3. Analyse equity shares using different approaches and models.
- CO4. Construct, analyse, select and evaluate portfolios along with a deep understanding of Capital market theory and associated models.
- CO5. Understand and analyse futures and options, use various options trading strategies and critically examine various innovations in derivatives market.

#### **UNIT-I**

Investment- Concept, objectives and process of investment management, financial and non-financial forms of investment, various investment avenues, sources of investment information, financial market and Investment Instruments, services of intermediaries in investment management, regulatory framework in financial market.

#### **UNIT-II**

Analysis of risk & return, concept of total risk, factors contributing to total risk, systematic and unsystematic risk, default risk, interest rate risk, market risk, management risk, purchasing power risk. Valuation of debt instruments- methods of valuation, risk management in debt market. Valuation of equity- methods of valuation including CAPM and their relevance.

#### **UNIT-III**

Fundamental analysis: concept & significance of economic analysis, industry analysis: introduction, need for industry analysis, alternative classification of industry, industry life cycle analysis, economic factors & industry analysis, Company analysis - nature and style of management, key role of financial analysis, ratio analysis.

Technical Analysis: line chart, bar chart, points and figures chart, candlestick chart, reversal patterns, continuation patterns, Dow Theory, Elliott wave theory.

#### **UNIT-IV**

Portfolio theory- Efficient Market hypothesis (EMH), Random walk theory, Markowitz diversification model, Sharpe single index model, Arbitrage pricing theory. Portfolio building process, tools used by value investors, Portfolio performance evaluation- Sharpe's and Treynor's portfolio performance evaluation, Portfolio revision- Active and passive strategies & formula plans in portfolio revision.

#### **Recommended Readings:**

1. Chandra, Prasanna. "Investment Analysis and Portfolio Management", MH
2. Alexander, Sharpe, & Bailey, "Fundamentals of Investment", PHI, New Delhi
3. Bhalla, V K, "Investment Management: Security Analysis and Portfolio Management", Sultan Chand, New Delhi.
4. Reilley & Brown, "Investment Analysis & Portfolio Management", Thomson Learning
5. Fuller, Russell J & Farrell, James L. "Modern Investment & Security Analysis". McGraw Hill, New York.
6. Alexander, Jordan J & Bailey, Jeffrey V. "Investment Analysis & Portfolio Management", Dryden Press, Thomson Learning, Bombay.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **E-Governance and Framework of ICT**

### **Course Code: 21IME23ET1**

External Marks: 80  
Sessional Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After doing this course, students should be able to:

- CO1: Understand the basic functioning of e-government
- CO2: Apply the technical and management skills in implementing e-governance projects.
- CO3: Analyse and evaluate assessment framework of e-government projects

#### **UNIT-I**

Overview of E-Government and E-Governance: Stages of E-Governance, National E-Governance Plan(NeGP), Mission Mode Projects and their implementation status, E-Governance Introduction to E-governance, Role of ICT in e-governance, Need, importance of E-governance, Categories of E-governance, Key Issues of E-Governance, Technology, Policies, Infrastructure, Training, Copyrights Consulting Funds, E-governance Models, Model of Digital Governance, Wider Dissemination Model.

#### **UNIT-II**

E governance Models: Critical Flow Model, Interactive-service model/Government to-Citizen- Government Model (G2C2G), Major areas of E-governance Services, Public Grievances: Telephone, Ration card, transportation, Rural services Land Records, Police: FIR registration, Lost and found, Social services: Death, domicile, school certificates, Public information: employment, hospitals, railway, Agricultural sector: Fertilizers, Seeds, Utility payments Electricity, water, telephone, Commercial: income tax, custom duty, excise duty- Governance Infrastructure.

#### **UNIT-III**

Phases of e-government: "Brochure ware", Interactive, and Transaction, Five Stages of Electronic Government Development, Statutes affecting e-government development, Human Infrastructural preparedness, Challenges for E-governance.

#### **UNIT-IV**

Policies: National Telecom Reforms, National Telecom Policies NTPs, Regulations: Digital Divide and Digital Dividends, Development and rationale of regulation and, deregulation, Role of Telecom Regulatory Agencies - Telecom Regulatory Authority of India (TRAI) and ITU, Information Technology Act (2000), Internet and E-commerce issues: privacy, security, domain names, etc, Wireless: frequency auctions, standards, competition.

#### **Recommended Readings:**

1. Vikram Raghavan, (2007). Communication Law in India-Legal Aspects of Telecom, Broadcasting, and Cable Services, 1st Edition, Lexis Nexis Butterworths.
2. D N Gupta, (2008). E Governance A Comprehensive Framework, 1st Edition, Jain Publications
3. Heather E Hudson, (2006). Global Connections - International Telecommunications Infrastructure and Policy, 1st Edition, Wiley Publication.
4. E. Bohlin and S.L. Levin, (2000). Telecommunications Transformation - Technology, Strategy and Policy, 1st Edition, IOS Press.
5. McElroy, (2003).KMCI (Knowledge Management Consortium International) and Butterworth Hienemann, 1st Edition.
6. R. K. Mitra, (2006). E-government: Macro Issues, 1st Edition, GIFT Publishing.

**Instructions for External Examiner:** The question paper shall be divided in two sections. **Section A** shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. **Section B** shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks

## **Data Warehousing and Data Mining**

### **Course Code: 21IME23ET2**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After doing this course, students should be able to:

- CO1. Identify the scope and necessity of Data Mining and Warehousing for the society.
- CO2. Describe the designing of Data Warehouse so that it can be able to solve the root problems.
- CO3. Understand various tools of Data Mining and their techniques to solve the real time problems.
- CO4. Develop further interest in research and design of new Data Mining techniques.

#### **UNIT-I**

Introduction: The Evolution of Data Warehousing the Data Warehouse A Brief History, Today's Development environment; Principles of Data; Warehousing (Architecture and Design Techniques): Types of Data and their uses conceptual Data, Architecture, Design Techniques, Introduction to the Logical Architecture; Creating the Data Asset: Business Data Warehouse Design, Populating the Data Warehouse, Unlocking the Data Asset for End Users (The Use of Business Information).

#### **UNIT-II**

Designing Business Information Warehouse; Populating Business Information Warehouse, User Access to Information, Information, Data in Context. Data Mining Introduction: Motivation, Importance, data mining, kind of data, Functionalities, Interesting Patterns, Classification of data mining systems, Major issues; Data Warehouse and OLAP Technology for Data Mining: Data warehouse, operational database systems and data warehouses, Architecture, Implementation, development of data cube technology, data warehousing to data mining, Data warehouse usage.

#### **UNIT-III**

Data Preparation: Pre-process, Data cleaning, Data integration and transformation, Data reduction, Discrete and concept hierarchy generation; Data Mining Primitives: Languages, and System Architecture, graphical user interfaces; Concept Description: Characterization and Comparison, Data generalization and summarization based characterization, Analytical characterization: analysis of attribute relevance, mining class comparisons, Mining descriptive statistical measures in large database.

#### **UNIT-IV**

Mining Association Rules in Large Database: Mining single dimensional Boolean association rules from transaction database, Mining multidimensional association rules from database and data warehouses, from associating mining to correlation analysis, Constraint based association mining; Classification and Prediction: Issues, classification by decision tree induction, Bayesian classification, Classification by back propagation; Classification based on concepts from association rule mining; Other classification methods.

Lab: Each student is required to develop at least one data-house.

#### **Recommended Readings:**

1. Sam Anahory, Data Warehousing in the Real World, Pearson Education
2. Margaret H. Dunham, Data Mining: Introductory and Advance Topics, Pearson Education.
3. Alex Berson, Stephen Smith, Kurt Threarlring; Building Data Mining Applications for CRM TMH
4. Alex Berson, Stephen Smith; Data Warehousing, Data Mining and OLAP, TMH
5. Michael J.A. Berry, Data Mining Techniques: for marketing sales and Customer Support, Gordon Linoff.
6. Han, Jiawei ; Data mining: Concepts and techniques, Harcourt.
7. Pujari, Arun K, Data, Mining Techniques, Hyderabad University Press.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Enterprise Resource Planning**

### **Course Code: 21IME23ET3**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After completing this course, student will be able to:

CO1: make basic use of Enterprise software, and its role in integrating business functions

CO2: analyse the strategic options for ERP identification and adoption.

CO3: design the ERP implementation strategies.

CO4: create reengineered business processes for successful ERP implementation.

#### **UNIT-I**

Introduction: Basic issues, evolution of ERP, advantages, pitfalls, overview of an enterprise; ERP and related technologies: Business process reengineering, management information system, decision support system, executive information system, data warehousing, data mining, supply chain management.

#### **UNIT-II**

Manufacturing perspective: CAD/CAM, material requirement planning (MRP-I), bill of material, manufacturing resource planning (MRP-II), distribution requirement planning, JIT approach.

#### **UNIT-III**

ERP Modules: Introduction to ERP modules in Finance, Plant maintenance, quality management, materials management.

#### **UNIT-IV**

ERP Implementation: ERP lifecycle, vendors, consultants and users, ERP market, future directions in ERP.

#### **Recommended Readings:**

1. Leon A., Enterprise Resource Planning, Tata McGraw Hill.
2. Veena Bansal, Enterprise Resource Planning, Pearson Education
3. Ellen Monk, Bret Wagner, Concepts in Enterprise Resource Planning, Cengage Learning.
4. Motiwalla, Thompson, Enterprise Systems for Management, Pearson Education.
5. Wallace and Kremzar, ERP: Making it Happen – The Implementers' Guide to Success
6. with Enterprise Resource Planning, John Wiley and Sons, Inc.
7. Sadagopan, S., ERP: A Managerial perspective. Tata McGraw Hill.
8. Garg, V. K. and Venket Krishna N. K., ERP Concepts and Practice, PHI Publication.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.



## Services Marketing

### Course Code: 2IIME23EM1

External Marks: 80  
Sessional Marks: 20  
Time Allowed: 3 Hours

#### Course Outcomes

After completing the course students would be able to:

- CO1: understand the unique challenges inherent in managing and delivering quality services.
- CO2: analyse the various components of the "services marketing mix" (the 7 P's).
- CO3: to identify the role of employees and customers in service delivery, customer satisfaction, and service recovery;
- CO4: develop students' abilities to identify services decision problems, ascertain alternatives, define crucial issues, analyse, make decisions and plan the implementation of these decisions

#### UNIT I

Introduction to Services: Service and Technology, Goods versus Services, Service Marketing Mix, Gap model of Services, important service industries-Hospitality and Tourism, Transportation, Telecom, Banking and Insurance, Education and Entertainment, Healthcare. Service classification and challenges in Service Business.

#### UNIT II

Focus on the Customer: Consumer Behaviour in Services, Customer Expectation of Services, and Customer perception of services. Elements in an effective services marketing research programme, Building customer relationship, Relationship development strategies, Reasons of Service failure, Service recovery and strategies.

#### UNIT III

Aligning Service design and standards: Challenges of Services Innovation and design, new service development process Service Blueprinting, Customer-defined service standards and its types, Physical evidence and types of servicescape, Strategic roles of servicescape

#### UNIT IV

Delivering and performing services: Employees role in service delivery, Customers role in service delivery, Delivering services through intermediaries and electronic channels, Strategies for matching capacity and demand, Key service communication challenges, Approaches to pricing services, Financial and Economic impact of services.

#### Recommended Readings:

1. Lovelock, C., Wirtz, J. and Chatterjee, J., Services Marketing, Pearson Education.
2. Zeithaml, V., Bitner, M.J., Gremler, D.D. and Pandit, A., Service Marketing. McGraw Hill.
3. Gopal Das, Essentials of Services Marketing, Pearson Education.
4. Srinivasan, Service marketing: Indian Context, PHI
5. Swartz, T., Iqobucci, D., Handbook of Service Marketing and Management, Sage Publication

**Instructions for External Examiner:** The question paper shall be divided in two sections. **Section A** shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. **Section B** shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks

## **Customer Relationship Management**

### **Course Code: 21IME23EM2**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After completing the course students would be able to:

- CO1. Apply the concept of CRM, the benefits delivered by CRM, the contexts in which it is used, the technologies that are deployed and how it can be implemented.
- CO2. Implement how CRM practices and technologies enhance the achievement of marketing, sales and service objectives throughout the customer life-cycle stages of customer acquisition, retention and development whilst simultaneously supporting broader organizational goals.

#### **UNIT-I**

Introduction – Origin, evolution and concept of CRM, strategic importance of CRM, goals of CRM, types of CRM, CRM Architecture

#### **UNIT-II**

Operational CRM – Sales force automation: lead management, contact management, field force automation; enterprise marketing automation: market segmentation, campaign management, customer service and support, contact and call center operations

#### **UNIT-III**

Analytical CRM – Managing and sharing customer data: customer information database, ethics and legalities of data use, data warehousing and data mining; types of data analysis – online analytical processing, click stream analysis, collaborative filtering, CRM and business intelligence collaborative CRM

#### **UNIT-IV**

CRM Implementation – Establishing CRM performance monitoring, CRM readiness assessment, system, CRM audit, CRM project management, employee engagement in CRM project, CRM budget, key account management, evaluating CRM return on investment

#### **Recommended Readings:**

1. Buttle, Francis, Customer Relationship Management – Concept and Tools, Elsevier Butterworth – Heinemann, Oxford, UK
2. Payne, Adrian, Handbook of CRM – Achieving Excellence in Customer Management, Butterworth – Heinemann, Oxford, UK
3. Dyche, Jill, The CRM Handbook – A Business Guide to Customer Relationship Management, Pearson Education, New Delhi
4. Knox, Simon, Stan Maklan, Adrian Payne, Joe Peppard and Lynette Ryal, Customer Relationship Management, Butterworth – Heinemann, Oxford, UK
5. Greenlers, Paul, CRM at the Speed of Light, Tata McGraw Hill Publishing Ltd., New Delhi
6. Anderson, Kristen, and Carol J Kerr, Customer Relationship Management, Tata McGraw Hill

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## Consumer Behaviour

### Course Code: 21IME23EM3

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### Course Outcomes

After completing the course students would be able to:

- CO1. Gain strategic understanding of the influential and persuasive mechanisms involved in consumer attitude, belief, and behaviour change, and will be able to apply this knowledge in addressing specific marketing problems.
- CO2. Examine the consumer from a managerial perspective and to develop marketing strategies to respond to consumers' changing attitudes and behaviour.
- CO3. Understand how to anticipate, adapt, and respond to consumer needs by applying the insight from basic consumer behaviour concepts to their marketing strategies.
- CO4. Understand the current and future research technologies for consumer insight and will be able to critically assess how they can be used in strategy formulation.

#### UNIT-I

Consumer Behaviour and consumer research; importance of consumer Behaviour; evolution of consumer Behaviour; methods of studying consumer Behaviour; customer centric organizations; market analysis; market segmentation, marketing mix strategies; value of brands in marketing strategy; customer loyalty and retention strategy; global marketing strategy; global advertising effectiveness; consumer decision process model; variables affecting the decision process; types of decision process; factors influencing the extent of problem solving; pre-purchase processes; need recognition; internal and external search; pre-purchase evaluation

#### UNIT-II

Different types of purchase situations; retailing and the purchase process; determinants of retail success or failure; point -of-purchase materials; consumer logistics; location based retailing; direct marketing consumption Behaviours; consumption experiences; importance of customer satisfaction; factors affecting satisfaction level; demographics and consumer Behaviour; economic resources and consumer Behaviour; personality and consumer Behaviour; personal values; lifestyle motivational conflict and need priorities; motivational intensity; motivating consumer

#### UNIT-III

Importance of consumer knowledge; types of consumer knowledge; sources of consumer knowledge; benefits of understanding consumer knowledge; consumer beliefs; consumer feelings; consumer attitudes; consumer intentions; culture and its effect on consumer Behavior; changing values and its effect on consumer Behaviour; changing values and its effect on marketing; determinants of social class; social class and consumer Behaviour; importance of families and households on consumer Behaviour; role Behaviour and its influence on the decision process; family life cycles; changing roles of women; children and household consumer Behaviour

#### UNIT-IV

Group and personal influences on individuals; reference group and its influence on individuals; transmission of influence through dyadic exchanges; word of mouth and opinion leaders in advertising and marketing strategy; diffusion of innovations; diffusion process; reaching the consumer; gaining consumer's attention; shaping consumer's opinion; opinions change; product's and advertising's role in shaping consumer opinion; cognitive learning; retrieval of information; company's role in helping consumers to remember

#### Recommended Readings:

1. Schiffman, Leon G. and S. Ramesh Kumar, Consumer Behaviour; Pearson Education
2. Jagdish Sheth, Consumer Behaviour: A Digital Native, Pearson Education.
3. Blackwell, Roger, Miniard, Paul and Engel, James; Consumer Behaviour; Thomson Learning; New Delhi
4. Loudon, David J. and DellaBitta, Albert; Consumer Behaviour; Tata McGraw Hill; New Delhi.
5. Solomon, Michael R.; Consumer Behaviour – Buying, Having and Being; Pearson Education
6. Nair, Suja R.; Consumer Behaviour in Indian Perspective; Himalaya Publishing House; New Delhi

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Project Management**

### **Course Code: 21IME23EO1**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After completing the course students would be able to:

- CO1. Explain the importance, scope and functions of project management in successful project and understand the life cycle of any given project
- CO2. Prepare estimation of guidelines for time, costs and resources required for project management by applying different methods
- CO3. Demonstrate the scheduling resources and reducing project duration
- CO4. Define role and responsibilities of the project manager, planning, organizing, controlling, skills of the project manager

#### **UNIT-I**

Project Analysis: Meaning, Overview, Capital Budgeting and Strategic Issues, Generation and Screening of Project Ideas.

#### **UNIT-II**

Feasibility Reports: Market and Demand Analysis; Technical Analysis; Financial Analysis; Analysis of Project Risk; Risk specific to individual firm and Market Risk; Decision under risk and Risk Analysis in Practice.

#### **UNIT-III**

Social Cost and Benefit Analysis: UNIDO approach and L-M Approach; Multiple Projects and Constraints, Financing of Projects, Sources of Risk capital, Recent development in India.

#### **UNIT-IV**

Project Management: Project Planning and Control, Human aspects of Project Management; Project Review and Administrative Aspects; Problem of Time and Cost Overrun.

#### **Recommended Readings:**

1. Chandra, Prasanna, Projects: Preparation, Appraisal, Budgeting and Implementation, Tata McGraw Hill.
2. Pradeep Pai, Project Management, Pearson Education.
3. Dhankar, Raj S., Financial Management of Public Sector Undertakings, Westville.
4. Little I.M.D. and J.A. Mirrlees, Project Appraisal and Planning for Developing Countries, Heinemann Educational Book.
5. OCED Manual of Industrial Project Analysis in Developing Countries- Methodology and Case Studies, OCED, Paris.
6. Planning Commission, Guidelines for Preparation of Feasibility reports of Industrial Projects, Controller of Publication.
7. UNIDO Guide to Practical Project Appraisal, United Nations.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Total Quality Management**

### **Course Code: 21IME23EO2**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After completing the course students would be able to:

CO1: conceptualize Total Quality.

CO2: closely link management of quality with that of reliability and maintainability for total product assurance.

CO3: describe the Concept of Total Quality and its evolution.

#### **UNIT-I**

Basics Concepts of Quality: Definition of Quality, Dimensions of Quality, Quality Planning, Quality costs - Analysis Techniques for Quality Costs, Basic concepts of Total Quality Management, Historical Review, Principles of TQM, Leadership - Concepts, Role of Senior Management, Quality Council, Quality Statements, Strategic Planning, Deming Philosophy, Barriers to TQM Implementation.

#### **UNIT-II**

TQM Principles: Customer satisfaction - Customer Perception of Quality, Customer Complaints, Service Quality, Customer Retention, Employee Involvement - Motivation, Empowerment, Teams, Recognition and Reward, Performance Appraisal, Benefits, Continuous Process Improvement - Juran Trilogy, PDCA Cycle, 5S, Kaizen, Supplier Partnership - Partnering, sourcing, Supplier Selection, Supplier Rating, Relationship Development, Performance Measures - Basic Concepts, Strategy, Performance Measure.

#### **UNIT-III**

Statistical Process Control: The seven tools of quality, Statistical Fundamentals - Measures of central Tendency and Dispersion, Population and Sample, Normal Curve, Control Charts for variables and attributes, Process capability, Concept of six sigma, New seven Management tools.

#### **UNIT-IV**

TQM Tools: Benchmarking - Reasons to Benchmark, Benchmarking Process, Quality Function Deployment (QFD) - House of Quality, QFD Process, Benefits, Taguchi Quality Loss Function, Total Productive Maintenance (TPM) - Concept, Improvement Needs. Quality System: Need for ISO 9000 and Other Quality Systems, ISO 9000:2000 Quality System - Elements, Implementation of Quality System, Documentation, Quality Auditing, TS 16949, ISO 14000 - Concept, Requirements and Benefits.

#### **Recommended Readings:**

1. Besterfield Dale H, Quality Control, Pearson Education.
2. Charantimath, P., Total Quality Management, Pearson Education.
3. Bedi, Quality Management, Oxford University Press.
4. Juran J. M. and Gryna, Jr. F.M., Quality Planning and Analysis, TMH, New Delhi
5. Ronald G Day, Quality Function Deployment, TMH, New Delhi..
6. Evan J.R., Total Quality Management, Excel Book, New Delhi.
7. Hansan B.L. and Ghare, P.M. Quality Control and Application, PHI.
8. Hagan, Management of Quality, Oxford University Press.
9. Juran J M and Frank M Gryna, Quality Planning and Analysing, TMH, New Delhi.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## Supply Chain and Logistics Management

**Course Code: 21IME23EO3**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

### Course Outcomes

After completing the course students would be able to:

- CO1. Explain concept and definitions of Supply Chain.
- CO2. Identify role of Supply Chain as a value driver - Integrative Management, Responsiveness, Financial Sophistication
- CO3. Appreciate the impact of globalization and technological revolution in Supply Chain management.
- CO4. Explain Customer Value, Customer satisfaction and CRM

### UNIT-I

Understanding the Supply Chain: Define Supply Chain, Objective of a Supply Chain, Importance of Supply Chain Decisions, Decision Phases in a Supply Chain, Process View of a Supply Chain, Competitive and Supply Chain Strategies, Achieving Strategic Fit, Expanding Strategic Scope, logistics as integral part of SCM, components of logistics

### UNIT-II

Designing the supply chain network: role of distribution, factors influencing distribution, design options, e-business and its impact, distribution networks in practice, network design in the supply chain, role of network, factors affecting the network design decisions, modelling for supply chain, designing and planning transportation networks: Role of transportation, modes and their performance, transportation infrastructure and policies design options and their trade-offs, tailored transportation.

### UNIT-III

Purchasing and Vendor management: Centralized and decentralized purchasing, functions of purchase department and purchase policies, single vendor concept, management of stores, accounting for materials. Inventory Management: Concept, various costs associated with inventory, various EOQ models, buffer stock (trade-off between stock out / working capital cost), lead time reduction, re-order point / re-order level fixation, exercises, ABC, SDE / VED Analysis, Just-In-Time and Kanban System of Inventory management.

### UNIT-IV

Decision-support systems for supply chain management: Introduction, the challenges of modelling structure of decision support systems, input data, analytical tools, presentation tools, supply chain decision: support systems. Recent Issues in SCM: Role of Computer / IT in Supply Chain Management, CRM vs. SCM, Benchmarking concept, Features and Implementation, Outsourcing-basic concept, Value Addition in SCM-concept of demand chain management.

### Recommended Readings:

1. Chopra, S. Peter Meindl, Kalra, D.V. "Supply Chain Management Strategy, Planning and Operation", Pearson Ed.
2. Shah, J. "Supply Chain Management", Pearson Education
3. Sharma: Supply Chain Management, Oxford University Press
4. Donald J Bowersox, Dand J Closs, M Bixby Coluper, "Supply Chain Logistics Management", TMH
5. Sahay B.S. "Supply Chain Management", Macmillan, New Delhi.
6. Agarwal D.K. "A Text Book of Logistics and Supply chain management", Macmillan, New Delhi.
7. Raghuram G. "Logistics and Supply Chain Management", Macmillan, New Delhi

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

**Business Analytics**  
**Course Code: 21IME23EB1**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

**Course Outcomes**

After completing the course students would be able to:

- CO1. Think critically in making decisions based on data and deep analytics.
- CO2. Use technical skills in predicative and prescriptive modelling to support business decision-making.
- CO3. Translate data into clear and actionable insights.

**UNIT-I**

Business analytics: introduction, types of analytics, characteristics of analytics, business analytics, and business intelligence; business analytics process and its relationship with decision making process; Advantage of business analytics: informed decisions, developing distinct capability, creating competitive advantage, key attributes of analytical competitors.

**UNIT-II**

Analytical methods and models: Descriptive analytics-overview of its tools and techniques, role in business analytics process and its importance in business decision making; Predictive analytics-nature and type of modelling, basics of data mining and machine learning environment, role in business analytics process and its importance in strategic decision making; Prescriptive analytics: basics of its tools and modelling, role in business analytics process.

**UNIT-III**

Business analytics in action: applicability and importance of business analytics in different areas- financial analytics, human resource analytics, marketing analytics, health care analytics, supply chain analytics, sport analytics and analytics for Government and non-profit organization.

**UNIT-IV**

Developing analytics: statistician, data scientist and data engineer and their key features, skills required for analytics, big data and its analyst, important analytics software, major companies providing analytical solutions, job opportunities in business analytics.

**Recommended Readings:**

1. James R. Evans, Business Analytics, Pearson Education.
2. Davenport, H., Harris J.G. (2007), Competing on Analytics: The New Science of Winning, Harvard Business Review Press.
3. Davenport H., Harris J.G. and Morison R. (2010). Analytics at Work: Smarter Decisions, Better Results, Harvard Business Review Press.
4. Schniederjans M.J., Schniederjans D.G. and Starkey C.M. (2014). Business Analytics Principles, Concepts, and Applications with SAS: What, Why, and How, FT Press Analytics.
5. Provost F., Fawcett T. (2013). Data Science for Business: What you need to know about data mining and data-analytic thinking, O'Reilly Media.
6. Siegel E. (2013). Predictive Analytics: The Power to Predict Who Will Click, Buy, Lie, or Die, Wiley.
7. Fitz-enz J. and Mattox J. (2014). Predictive Analytics for Human Resources, Wiley and SAS Business Series.
8. Maisel L. and Gokins G. (2014). Predictive Business Analytics: Forward Looking Capabilities to Improve Business Performance, Wiley.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## Fundamentals of Econometrics

**Course Code: 21IME23EB1**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

### Course Outcomes

On successful complete of this course, the students should be able to:

- CO1. Provide knowledge about the scope of econometrics
- CO2. Prove economic theories mathematically
- CO3. Analyses how to maximise profit of the firms and industries
- CO4. Understand about the interrelationship between different sectors in an economy
- CO5. Understand the cost benefit analysis
- CO6. Understand the decision making process in industries

### UNIT-I

Nature, scope and methodology of econometrics; Simple Linear Regression Model: Assumptions, Procedures and properties of OLS estimator, Co-efficient of determination, Tests of significance, Maximum Likelihood Method

### UNIT-II

Multiple Linear Regression Analysis: Method of least squares, Properties of OLS estimator, Test of significance of regression co-efficient,  $R^2$  and adjusted  $R^2$ ; Econometric Problems: Multicollinearity, Autocorrelation and Heteroscedasticity.

### UNIT-III

Dummy variables-Nature and uses, Regression on dummy variables, Regression on Dummy Dependent Variable- The basic idea of the Linear Probability Model (LPM), Probit and Logit Models. Dynamic Econometric Models: Koyck distributed lag model, the adaptive expectation model, and the partial adjustment model.

### UNIT-IV

Simultaneous Equation Models: Structural, Reduced and final forms, Identification-Order and rank conditions, Methods for estimating the simultaneous models-Basic idea of Indirect Least Square (ILS) and Two Stage Least Square (2SLS) methods. Seemingly Unrelated Regressions (SUR), SUR versus OLS.

### Recommended Readings:

1. Greene, William H., Econometric Analysis, Pearson Education.
2. A.H Studenmund, Using Econometrics, Pearson Education.
3. Johnston, J., Econometric Methods, McGraw -Hill.
4. Gujarati, Damodor N., Basic Econometrics, McGraw-Hill.
5. Stock J. H. and Watson M.W. Introduction to Econometrics, Pearson Education.
6. Koutsoyiannis, A., Theory of Econometrics, Harper and Row.
7. Kmenta, J., Theory of Econometrics, Macmillan.
8. Maddala, G.S., Introduction to Econometrics, Macmillan.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.



## Predictive Business Analytics

### Course Code: 21IME23EB3

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### Course Outcomes

On successful complete of this course, the students should be able to:

- CO1. Analyse current and historical facts to make predictions about future, or otherwise unknown, events.
- CO2. Understand and exploit patterns in historical and transactional data
- CO3. Identify risks and opportunities.

#### UNIT-I

Introduction to Predictive Analytics: overview, business intelligence, predictive analytics in relation to business intelligence, statistics, data mining; Big data, importance in decision making; Setting up prob1 CRISP-DM, business understanding, Defining data, target variable and measures of success for predictive modelling; Methodology of predictive modelling.

#### UNIT-II

Prediction Methods: Linear Regression- best subset selection, forward selection, backward selection, step-wise regression, Cp mallows and adjusted R-square criteria; k-Nearest Neighbours (k-NN); Regression Trees- CART, CHAID; Neural Nets- architecture of neural nets, neurons, input layer, hidden layers, output layer.

#### UNIT-III

Classification Methods: the naïve rule, Naïve-Bayes classifier, K-Nearest neighbours, Classification Trees, Neural Nets, Logistic Regression.

#### UNIT-IV

Non-supervised Learning: Association Rules- support and confidence, the apriori algorithm, the selection of strong rules; Cluster Analysis- hierarchical methods, optimization and the k-means algorithm, similarity measures, other distance measures. Ensemble Methods: Nelson and Granger-Ramanathan methods for continuous targets, Majority voting for categorical targets, Bagging, Boosting.

#### Recommended Readings:

1. Miller Thomas W. Modelling Techniques in Predictive Analytics with Python and R, Pearson Education.
2. Maisel L. and Cokins G. Predictive Business Analytics: Forward Looking Capabilities to Improve Business Performance. Wiley.
3. Marketing Data Science: Modelling Technique in Predictive Analytics with R and Python, Pearson Education.
4. Siegel E. Predictive Analytics: The Power to Predict Who Will Click, Buy, Lie, or Die. Wiley.
5. Bartlett R. A Practitioner's Guide to Business Analytics: Using Data Analysis Tools to Improve Your Organization's Decision Making and Strategy .McGraw-Hill Education.
6. Fitz-enz J. and Mattox II J. Predictive Analytics for Human Resources. Wiley.
7. Abbot D. Applied Predictive Analytics: Principles and Techniques for the Professional Data Analyst; Wiley.
8. Dean J. Big Data, Data Mining, and Machine Learning: Value Creation for Business Leadersand Practitioners .Wiley and SAS Business Series.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## SECOND YEAR: FOURTH SEMESTER

### CSR and Business Ethics Course Code: 2IIME24C1

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### Course Outcomes

After completion of the course, student will be able to:

- CO1. Analyze the impact of environmental issues on business.
- CO2. Understand the social responsibilities of business.
- CO3. Evaluate the effects on a firm's costs of meeting its ethical, social and environmental responsibilities.
- CO4. Learn about various standards and codes related to business
- CO5. Understand Basic concepts of Business Ethics understand Values, Norms and Beliefs
- CO6. Analyze the Role of values for managers
- CO7. Understand Ethical Codes understand Corporate Social Responsibility Analyze CSR initiatives
- CO8. Understand Ethical issues in employer – employee relation

#### UNIT I

Indian Ethos: Meaning of Bharat, relevance of Indian ethos, role of Indian ethos in managerial practices; Sources of Indian Ethos in Management: Vedas, Ramayana, Bible, Quran, Kautilya's Arthashastra, Ethics vs. Ethos; Indian Management v/s Western Management

#### UNIT II

Modern Approach towards Indian Ethos : Introduction, Indian Management Thoughts, Holistic Approach to Management; Sadhana –In Management context, The Tatwas in Indian Ethos; Management Thoughts and Practice: Harmony with Environment, Dharma, Swadharma and Detachment, Holistic approach to Personality, Managerial Purusharth Karma yoga and enlightened leadership

#### UNIT III

Learning and Education System in India: Learning concept, Gurukul System of Learning, The beginning of modern education system, Achievements of the Indian education system; Law of Karma, Law of creation, law of humility, law of growth, law of responsibility

#### UNIT IV

Human Values: Meaning, significance, Vedic literature and values, formation of values, Aristotle's view on value inculcation, Objectives of value-based system, Interrelation of Values and Skills, Values and the workplace, Value-based Human response management, Need of value-based holistic management, Value-driven management, Indian culture and wisdom, The ethical and spiritual values and Methods of heart and mind purification

#### Recommended Readings:

1. Agarwal, T. and Chandorkar, N., Indian Ethos in Management, Himalaya Publishing House
2. Nandgopal, R. and Sankar, R.N.A., Indian Ethos and Values in Management, Tata McGraw Hill Education
3. A.C Fernando, Business Ethics, Pearson Education.
4. Ganjre, A.K., Pawar, P. and Laxman R., Indian Ethos - Modern Management Mantra, Himalaya Publishing House
5. Bansal, I., Management Concept in ancient India psycho-philosophic thought and their significance in present day organization, Jaipur, Narayan Publication
6. Sharma. S., Management in New Age: Western Windows Eastern Doors Management, New Age International

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Entrepreneurship**

### **Course Code: 21IME24C2**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After completing the course students would be able to:

- CO1. Develop entrepreneurship as a field of study and as a profession.
- CO2. Understand the creative process of opportunity identification and screening.
- CO3. Understand the importance of innovation in the creation of sustainable competitive advantage.
- CO4. Understand techniques to test a business model to ensure its viability.

#### **UNIT-I**

Entrepreneurship: Concept, theories, process, factors impacting emergence of entrepreneurship, Growth of entrepreneurship environment in India, Role of entrepreneurship in economic development, Traits of successful entrepreneurs; Managerial vs. entrepreneurial approach, Entrepreneurial promotion in India.

#### **UNIT-II**

Starting the venture: Creative thinking, Business idea generation (Business cases on entrepreneurship), Environmental scanning pertaining to business idea: Feasibility study: Market feasibility, Technical/ Feasibility operations, financial feasibility, Project Report.

#### **UNIT-III**

Functional Plans: Drawing a business plan, selecting organization type for business, Organization structure and Job designs, Designing financial plan: Investment, Incomes and Expenditure, Banking and Accounts, understanding profitability.

#### **UNIT-IV**

Sources of Finance: understanding Financial Framework: Debt Equity Financing, Commercial banks, Venture Capital, Financial institutions supporting entrepreneurs, Angel investors. Understanding IPR: Patents, Trademarks, Copy rights, Trade secrets, Licensing, Franchising.

#### **Recommended Readings:**

1. Charantimath, Poornima, Entrepreneurship Development & Small Business Enterprises, Pearson Education.
2. Hisrich, Robert D., Michael Peters and Dean Shepherd, Entrepreneurship, Tata McGraw Hill, New Delhi
3. Barringer, Brace R., and R. Duane Ireland, Entrepreneurship, Pearson Education.
4. Lall, Madhurima, and Shikha Sahai, Entrepreneurship, Excel Books, New Delhi.
5. Kuratko, Donand and Richard Hodgetts, Entrepreneurship, Cengage Learning India Pvt. Ltd., New Delhi

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

**Managing Interpersonal and Group Processes**  
**Course Code: 21IME24EH1**

External Marks: 80  
 Internal Marks: 20  
 Time Allowed: 3 Hours

**Course Outcomes**

After completing the course students would be able to:

- CO1. Develop deeper understanding of the interpersonal and group processes in organizations.
- CO2. Examine and develop process facilitation skills through experience-based methods of learning.
- CO3. Grasp over the variety of skills that support work relationship in organizations.

**UNIT-I**

Group dynamics: types of groups, group properties, roles, norms, status and size, stages of group development and change; Group cohesiveness: factors contributing to group cohesiveness, Influence processes- power and politics in groups.

**UNIT-II**

Interpersonal communication: Uncertainty reduction theory, Social exchange theory, Cognitive dissonance theory; Interpersonal awareness and feedback process- Transactional Analysis; Interpersonal trust; Competition and cooperation.

**UNIT-III**

Group decision making: The Vroom Yetton Model, Techniques of group decision making, Advantages and disadvantages of group decision making; Group synergy; Team building.

**UNIT-IV**

Inter-group relation and conflict: nature and types of conflicts, causes of conflicts and remedial measures of group conflicts, Role of Negotiation in group conflicts; distributive and integrative negotiation, third party negotiation; Fundamental interpersonal relations orientation (FIRO-B).

**Recommended Readings:**

1. Robbins, S.P., Organizational Behaviour, Pearson Education.
2. Chandan, J S, Organizational Behaviour, Vikas Publication.
3. David A. Whetten, Development Management Skills, Pearson Education.
4. P.S James, Organizational Behaviour, Pearson Education.
5. Mainiero, L A and Tromley C L., Developing Managerial Skills in OB, Prentice Hall of India,
6. Moore, M D., Inside Organizations: understanding the Human Dimensions, Sage.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Training and Development**

### **Course Code: 21IME24EH2**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After completing the course students would be able to:

- CO1. Understand the role of training systems and processes in organization.
- CO2. Describe the psychology of the learning process on which training is based.
- CO3. Evaluate the value of the training once completed from the individual employee and the organization's viewpoint.
- CO4. Assess design, access and implement various methods, techniques and sources of training.

#### **UNIT I**

Training - concept and rationale, training system and processes, trends in training, KSA'S- Types; Aligning training with strategy; Role of stakeholders in training programme; Training needs assessment – organizational analysis, operational analysis, person analysis.

#### **UNIT II**

Learning Theories: Reinforcement theory, Social learning theory, Goal theory, Need theory, Expectancy theory, Adult learning theory and Information processing theory. Learning process, Factors influencing the learning process, Participants learning styles; Considerations in designing effective training programs - Selecting and preparing the training site, choosing trainers.

#### **UNIT III**

Training Methods: Presentation methods - Lecture and Audio visual techniques; Hands on methods- OJT, simulations, case studies, business games, role plays, Behaviour modelling; Group building methods: Adventure learning, team building, action learning; Evaluation of training - need for evaluation, criteria and approaches; return on investment in training.

#### **UNIT IV**

Special issues in training and employee development: Training issues resulting from the external environment- Legal issues, cross cultural preparation, managing work force diversity, school- to- work transition; Internal needs of the company - Life-long learning, Melting the Glass ceiling, joint union management programs, Succession planning, Developing managers with dysfunctional Behaviours. Management development: Characteristics of managers, Management development implications, Sources of knowledge/ skill acquisition, Training for executive -level management.

#### **Recommended Readings:**

1. Noe, A Raymond, and Kodwani, D Amitabh, Employee Training and Development, McGraw Hill Education
2. Blanchard, P Nick, and James W. Thacker, Effective Training - Systems, Strategies, and Practices, Pearson Education.
3. Agochia, Devendra, Every Trainer's Handbook, New Delhi; Sage Publications
4. Desimone, R. L., Werner, J. M. and Harris, D. M. "Human Resource Development", Thomson Learning Press.
5. Sahu, R.K., Training for Development, Excel Books, New Delhi
6. Goldstein, Training in Organization, Thomson Learning, Bombay
7. McGrath, Training for Life and Leadership in Industry, Prentice Hall of India, New Delhi
8. Jack J. Phillips, Hand book of Training Evaluation and Measurement Methods, Rutledge

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## International Human Resource Management

Course Code: 21IME24EH3

External Marks: 80  
Sessional Marks: 20  
Time Allowed: 3 Hours

### Course Outcomes

After completing the course students would be able to:

- CO1: understand strategic perspective of HRM in an organization.
- CO2: understand the cultural and related Behavioural variables in HRM of International Organization.
- CO3: understand forecasting, acquisition and management of human resources in an effective manner.

### UNIT-I

IHRM- Introduction, differences between domestic and international Human Resource approaches of International Human Resource Management, Challenges in international labour market, Linking HR strategies to International expansion strategies, multiculturalism: nature of culture, cultural dimensions, managing across cultures: strategies, cross cultural differences and similarities.

### UNIT-II

International environment: political, legal and technological; Recruitment and Selection - Staffing policies, approaches, Selection criteria, recent trends in international staffing, Performance management of international employees, issues in managing performance in the international context.

### UNIT-III

HRM in cross border mergers and acquisitions. Training in international management: training strategies, expatriate training, types of training programmes and emerging trends in training for competitive advantage. International Compensation: objectives, theories, components and compensation package.

### UNIT-IV

International industrial relations - nature, approaches and strategic issues before employers, employees and government. Cross cultural communication and negotiation: communication process, barriers, effectiveness and managing cross cultural negotiation. Repatriation: challenges, benefits, process and managing repatriation.

### Recommended Readings:

1. Tony Edwards, International Human Resource Management, Pearson Education.
2. Luthans and Doh, "International Management: culture, strategy and Behaviour", Tata McGraw Hill, New Delhi.
3. Tayeb, International Human Resource Management, Oxford University Press.
4. Helen Deresky, "International Management: managing across borders and cultures, Pearson Education.
5. Budhwar, Pawan. "Managing Resources in Asia-Pacific". Rutledge Taylor and Francis Publication
6. Paul Sparrow., Chris Brewster and Hillary Harris. "Globalizing Human Resource Management", Rutledge Taylor and Francis Publication
7. Hofstede, G., Cultures Consequence: International Differences in Work Related Values, Sage.

**Instructions for External Examiner:** The question paper shall be divided in two sections. **Section A** shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. **Section B** shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

**Management of Financial Services**  
**Course Code: 21IME24EF1**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

**Course Outcomes**

After completing the course students would be able to:

CO1: describe operational, business, financial and traditional risk.

CO2: distinguish among various financial intermediaries and markets.

**UNIT-I**

Financial Services – Silent features, scope and problems; regulatory and theoretical frame work of leasing; Merchant Banking and its services.

**UNIT-II**

Credit Rating Agencies – Objectives, functions, importance, rating methodologies and benchmarks, factoring and forfeiting- meaning, types and mechanism.

**UNIT-III**

Housing Finance – Evolution and Role, Housing Finance Institutions and types of loans, issues and future outlook, role of NHB in housing finance; Investor Protection Fund- objectives and grievances redressal mechanism under investor protection fund; Securitisation – concept, mode, mechanism and securitisation in India.

**UNIT-IV**

Venture capital- meaning and role, venture capital investment process, stages of venture capital financial and exit routs for venture capitalist; Private Equity – meaning, working and types; Mutual Funds- concepts, organization and types of mutual fund schemes.

**Recommended Readings:**

1. Suresh, P. and Paul. J., Management of Banking and Financial Services, Pearson.
2. Khan, M.Y. Management of Financial Services, McGraw-Hill.
3. Gordan, E and K. Natrajan, Emerging Scenario of Financial Services. Himalaya Publishing House.
4. B.V. Pathak, Indian Financial System, Pearson Education.
5. Bhole, L.M., “Financial Institutions and Markets”, Tata McGraw Hill, New Delhi.
6. Machiraju, H.R. Indian Financial System”, Vikas Publishing House.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Financial and Commodity Derivatives**

**Course Code: 21IME24EF2**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

### **Course Outcomes**

After completing the course students would be able to:

CO1: construct models for pricing of financial derivatives

CO2: price simple financial derivatives with risk neutral valuation

CO3: present financial models and pricing of financial instruments

### **UNIT-I**

Concept and type of derivatives; Participants - hedgers, speculators, arbitragers and scalpers; uses of derivatives; types of orders; derivative markets in India- current trends and future prospects.

### **UNIT-II**

Fundamentals of futures and forwards - concept of futures; trading mechanics; basics of stock index future; interest rate futures; currency futures (basics); use of futures for hedging;; difference between forward and future contracts; clearing process.

### **UNIT-III**

Types of options, trading strategies involving options; option pricing - black scholes option pricing model; Fundamental of swaps - introduction to swaps; interest rate swaps; currency swaps; mechanics of swap interest rate swap and currency swaps; swap pricing

### **UNIT-IV**

Introduction to Commodity Derivatives: Cereals, metals and energy products; History and Contemporary issues of Indian derivative markets; Future of Commodity Derivatives in India.

### **Recommended Readings:**

1. Hull, John C., Options, Futures, and Other Derivatives, Pearson Education.
2. Chance, Don M., An Introduction to Derivatives and Risk Management, Harcourt College Publishing
3. Robert A Strong, Derivatives: An Introduction, Thomson Learning, Bombay
4. Redhead, Financial Derivatives : An Introduction to Future/Forward, Options and Swaps, Prentice Hall of India, New Delhi
5. Gupta, S.L., Financial Derivatives. PHI
6. Aman Chugh and Divik Maheshwari, Financial Derivatives, Pearson Education.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.



## **Financial Decisions Analysis**

**Course Code: 21IME24EF3**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

### **Course Outcomes**

After completing the course students would be able to:

CO1: describe the basic concepts in operational finance

CO2: apply the decision analysis techniques and tools to various phases of financial processes.

CO3: apply suitable models and methods to decision making situations

CO4: solve financial decision problems through the use of quantitative and qualitative analysis techniques

### **UNIT-I**

An overview of international financial management; international monetary and financial systems, IBRD and development banks; finance function in a multination firms; international flow of funds

### **UNIT-II**

International working capital management: international cash management; international receivable management, managing short term assets and liabilities; international capital money markets; euro dollar and currency market; financial market instruments - GDRs, ADRs, Euro issues, CP and ECB

### **UNIT-III**

International and multinational capital budgeting, cost of capital and capital structure decisions; dividend policy of multinational firm

### **UNIT-IV**

Decision with the help of activity based costing, theory of constants and target costing; An overview of Balance Score Card.

### **Recommended Readings:**

1. T. Siddaiah, International Financial Management, Pearson Education.
2. Madura Jeft International Financial Management: Thomson Learning
3. Sharan, V., International Financial Management, PHI, New Delhi
4. Allen Shapiro, Multinational Financial Management, PHI, New Delhi
5. Apte, P.G., International Financial Management. Tata McGraw Hill
6. Drury, Colin, Management Accounting and Control, Thomson Learning
7. Horngren, Datar Foster, Cost Accounting, Pearson Education
8. Hansen and Mowen, Cost Management, Thomson Learning

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## Information Security and Cyber Laws

Course Code: 21IME24ET1

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

### Course Outcomes

On Completion of the course, the students will be able to

CO1: describe the concepts of Cybercrime and Information security.

CO2: analyse Cybercrime in Mobile and Wireless Devices.

CO3: apply security techniques for a given scenario.

CO4: analyse various Cyber Forensic algorithms.

CO5: implement various modules for cyber security applications.

### UNIT-I

Overview of basic concepts of security: Confidentiality, Integrity and Availability; Security threats, Information security principles, operational and human issues in information and network security; Security policies: types, development and management

### UNIT-II

Authentication, Access control mechanism, Physical security control, Operations security, Cryptography: basic concepts, symmetric and asymmetric cryptography; Key management, Firewalls, Intrusion detection, malware detection

### UNIT-III

Legal Issues in information and communication technology, cyber-crime and IT Act 2000, Legal resources against Hacking, Cyber fraud, defamation and abuse, pornography and other IT offences; Contracts in cyber world and Jurisdiction

### UNIT-IV

Cybersquatting, legal and other innovative moves against cybersquatting, Copyright and protection of contents; Software piracy; E-Commerce Taxation, Protection of Cyber consumers in India

### Recommended Readings:

1. Mark Merkow and James Breithaupt, Information Security: Principles and Practices, Pearson Education.
2. Vivek Sood, Cyber Law Simplified, Tata McGraw Hill, New Delhi
3. Matt Bishop, Introduction to Computer Security, 1/e, Pearson Education.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

**E-Business Information Systems Management**  
**Course Code: 21IME24ET2**

External Marks: 80  
 Internal Marks: 20  
 Time Allowed: 3 Hours

**Course Outcomes**

After completing the course students would be able to:

- CO1: demonstrate advanced knowledge of technical and business issues related to E-Business and E-Commerce.  
 CO2: work in a virtual team environment, developing high-level business requirements

**UNIT-I**

Basics of E-Business, E-Business Strategy: Planning to Action, E-Business Design, and E-Procurement. System Development Environment: Types of Information Systems; System Development Life Cycle; System Analyst – Role, Responsibility, Analytical Skills; Managing Information systems Project

**UNIT-II**

Information Systems Planning: Identifying and Selecting Systems Development Projects; Initiating and Planning Systems Development Projects.

**UNIT-III**

Information Systems Analysis: Determining System Requirements; Structuring System Process Requirements; Structuring System Logic Requirements; Structuring System Data Requirements.

**UNIT-IV**

Information Systems Implementation and Maintenance: System Implementation, Software Application Testing, Installation, Documenting the System, Training and Supporting Users, Organizational Issues in Systems Implementation; Maintaining Information Systems.

**Recommended Readings:**

1. Hoffer, Jeffrey A., et al., Modern Systems Analysis and Design, Pearson Education.
2. Laudon Kenneth and Laudon Jane, Management Information System, Pearson
3. O'Brien James A., Management Information Systems, Tata McGraw Hill.
4. Alter, Steven, Information Systems: The Foundation of E-Business, Pearson Education.
5. Kumar Muneesh, Business Information Systems, Vikas Publishing House.
6. Dewitz, Sandra D., System Analysis and Design and the Transition to Objects, McGraw- Hill.
7. Robertson James and Suzanne, Complete System Analysis, Volume I and II, Dorset House Publishing.
8. Sahil Raj, Management Information System, Pearson Education.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Systems Analysis and Design**

### **Course Code: 21IME24ET3**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

On completion of the course, student will be able to:

CO1: understand the basic principles of systems analysis and design.

CO2: understand the role systems analyst in system design.

CO3: draw data dictionary, Pseudo code, Structured English, Data Flow Diagram

#### **UNIT-I**

Concept of system, Business Information System, types of business information systems, overview of system development methodologies, role of systems analyst, CASE tools for systems analyst; feasibility study - economic, organizational and cultural, technological, schedule and resource.

#### **UNIT-II**

System Development Life Cycle : Preliminary investigation - Information System Projects, evaluation of system requests, major steps in preliminary investigation; Systems Analysis - fact finding techniques, documentation, data flow diagrams, data dictionary; cost benefit analysis.

#### **UNIT-III**

Systems Design : User interface design, input and output design, data design; Systems Implementation: Application development, quality assurance, structured application development - structure charts, cohesion, coupling, testing, program, system, operations, user documentation; Installation - Training, system changeover.

#### **UNIT-IV**

Designing Distributed and Internet Systems: designing distributed systems - designing systems for LANs, for client / server architecture; designing internet systems - internet design fundamentals, design issues related to site management, managing online data.

#### **Recommended Readings:**

1. Kendall and Kendall, System Analysis and Design, Pearson Education.
2. Shelly, Cashman, Rosenblatt, System Analysis and Design, Cengage Learning.
3. Satzinger, System Analysis and Design, Cengage Learning.
4. Hawryskiewycz, I T. Introduction to Systems Analysis and Design, PHI.
5. Whitten, J L. System Analysis and Design Methods, Galgotia.
6. Awad, Elias M., Systems Analysis and Design, Prentice Hall of India.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Integrated Marketing Communication**

### **Course Code: 21IME24EM1**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After completing the course students would be able to:

- CO1: understand various marketing cues
- CO2: create an communication campaign for marketing purpose
- CO3: understand various kind of media to be utilized in marketing communication
- CO4: find out solution of communication needs

#### **UNIT-I**

Introduction – Concept of marketing communication, marketing communication mix, factor affecting marketing communication mix, drivers of integrated marketing mix; models of marketing communication – Blade Box Model, AIDAS model, Lavidge Steiner model, DAGMAR model, PCB model; marketing communication planning process

#### **UNIT-II**

Managing the Marketing Communication Process – Analysis of promotional opportunities, concepts of segmentation and target marketing, promotional strategy of formulation and competitive positioning, determination of promotional objectives, deciding promotional appropriation, integrating marketing communication programme, commissioning and contracting external resources

#### **UNIT-III**

Advertising and Media Planning – Advertising plan, creative strategy, advertising appeal, creative formats, stages of creative strategy – idea generation, copy writing, layout, copy testing and diagnosis; media planning – traditional and contemporary media; media objectives – reach, frequency, cost etc.; media strategy, media scheduling, media planning models, key issues in advertising – comparative advertising, web advertising; advertising agency – functions and types, outdoor advertising

#### **UNIT-IV**

Wider Issues and Dimensions – Sales promotions, personal selling, direct marketing, public relations, publicity and corporate advertising, unconventional promotional media, marketing communication budgeting, measuring promotional performance, global marketing communication, legal and ethical issues in integrated marketing communication

#### **Recommended Readings:**

1. Shah, Kruti and Alan D'Souza, Advertising and Promotion – An IMC Perspective, Tata McGraw Hill, New Delhi
2. Belch, George and Belch, Michael; Advertising and Promotion, Tata McGraw Hill, New Delhi
3. Moriarty, Sandra and Wells, William. Advertising and IMC, Pearson Education.
4. Jethwaney, Jaishree and Jain, Shruti; Advertising Management; Oxford University, New Delhi
5. Kenneth E. Clow, Integrated Advertising, Promotion and Marketing Communications, Pearson Education.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Product and Brand Management**

**Course Code: 21IME24EM2**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

### **Course Outcomes**

After completing the course students would be able to:

- CO1. Understand applications of new product management, planning and policy techniques, essentials of branding and approaches to effective branding strategy.
- CO2. Understand the important issues in planning and evaluating product and brand strategies.
- CO3. Understand contemporary issues in product and branding development and sustainability.

### **UNIT-I**

Branding terminology, basic branding concepts- brand awareness, brand personality, brand image, brand identity, brand loyalty, brand equity, major branding decisions: selecting a brand name, brand extension decision, family versus individual brand names, multiple branding, private versus national branding, importance of branding

### **UNIT II**

Branding challenges and opportunities, concept of brand equity, sources and benefits of brand equity, customer based Brand equity, designing marketing programme to build brand equity, measurement of brand equity, Strategic brand management process, concept of Brand positioning and repositioning, Identifying and establishing brand positioning and values.

### **UNIT III**

Planning and implementing brand marketing programmes, designing marketing programs, measuring and interpreting brand performance, Legal aspects of Branding, Copyright, Trademarks and IPR, designing and implementing branding strategies; Brand building and communication, E- Branding, handling brand name changes

### **UNIT IV**

New products and brand extension, evaluating brand extension opportunities, reinforcing brands, revitalising brands, managing brands over geographic boundaries and market segments, rationale for going international, global marketing programs- advantage and disadvantage, standardisation versus customisation, global brand strategy. Branding in rural marketing, branding in specific sectors: retail, industrial, service brands

### **Recommended Readings:**

1. Kevin lane Keller, Strategic Brand Management, Pearson Education.
2. David A Aaker, Managing Brand Equity, New York, Free Press.
3. Don Cowley, understanding brands, Kogan page
4. J.N. Kapferer, Strategic Brand Management, Free Press.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## Sales and Distribution Management

Course Code: 21IME24EM3

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

### Course Outcomes

After completing the course students would be able to:

CO1: understand the concepts of sales and distribution management.

CO2: appreciate various facets of job of sales manager.

CO3: make and implement decisions for sales and distribution management.

CO4: build knowledge, understanding, and skills in Sales and Distribution management.

CO5: develop and implement Sales and Channel management strategies.

CO6: analyze decision alternatives and criteria in the context of realistic problem situations in Sales and Channel management.

### UNIT-I

Sales Management: Role of Sales Management in Marketing, Nature and Responsibilities of Sales Management, Modern Roles and Required Skills for Sales Managers. Theories of Selling. Sales Planning: Importance, approaches and process of sales planning; Sales forecasting; Sales budgeting. Sales Organization: Purpose, principles and process of setting up a sales organization; Sales organizational structures; Field sales organization; determining size of sales force.

### UNIT-II

Territory Management: Need, procedure for setting up sales territories; Time management; Routing. Sales Quotas: Purpose, types of quotas, administration of sales quotas. Managing the Sales-force: Recruitment, selection, training, compensation, motivating and leading the sales-force; Sales meetings and contests.

### UNIT-III

Control Process: Analysis of sales, costs and profitability; Management of sales expenses; evaluating sales force performance; Ethical issues in sales management.

### UNIT-IV

Distribution Channels: Role of Distribution Channels, Number of Channels, Factors Affecting Choice of Distribution Channel, Channel Behaviour and Organization, Channel Design Decision; Channel Management Decisions; Distribution Intensity; Partnering Channel Relationship.

### Recommended Readings:

1. Still, Cundiff, Govoni and Sandeep Puri, Sales and Distribution Management, Pearson Education.
2. Anderson R, Professional Sales Management, Englewood Cliff, New Jersey, Prentice Hall, India.
3. Spiro, Rosann L., Gregory A. Rich, and William J. Stanton, Management of a Sales Force, McGraw-Hill Irwin, Boston.
4. Dalrymple, Douglas J., and William L., Sales Management: Concepts and Cases, New York, NY: Wiley
5. Panda, T. K., Sahadev, S., Sales And Distribution Management, Oxford Publishing, India
6. Hughes, G. David, Daryl McKee, Charles H. Singler, Sales Management: A Career Path Approach, Cincinnati, OH: South-Western College Publishing
7. Peppers, D. and Rogers, M., 'The short way to long-term relationships'. Sales and Marketing Management

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## Warehouse Management and Inventory Control

### Course Code: 21IME24E01

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### Course Outcomes

After completing the course students would be able to:

CO1: understand the basic concepts and various functions of Warehouse and Inventory control.

CO2: understand various types of warehouses and Inventory and their advantages.

CO3: identify material storage systems and material handling equipment.

CO4: understand Inventory management and classification of various types of Inventories.

CO5: understand the importance of IT in Warehousing.

#### UNIT I

Warehouse management: meaning and significance; warehouse organization: requisitions and replenishment of materials, receipt and inspection of materials, issue of materials, stocktaking, discrepancies and their resolution, control of tools, surplus, and scrap materials, storage and handling practices of materials

#### UNIT II

Computerization of warehouse activities, performance evaluation of stores activities, iso standards and warehouse activities, warehouse location, layout, and facilities planning, warehouse security, safety, and maintenance

#### UNIT III

Inventory Management: inventory concepts, pressures for low inventory, pressures for high inventory, types of inventory – seasonal, decoupling, cyclic, pipeline, safety stock; inventory costs; inventory control systems: issues in the P and Q systems of inventory control; The Basic Economic Order Quantity Model, Production Quantity Model, Quantity Discounts, Reorder Point, Safety Stocks, Service Level, Order quantity for periodic inventory system, Order quantity with variable demand

#### UNIT IV

Just-In-Time: Principles of just-in-time, Core logic of JIT, Main features for stocks, Achieving just-in-time operations, and other effects of JIT, Benefits and disadvantages of JIT, Comparison with other methods of inventory management. KANBAN as a control tool. Vendor managed inventory; Make or Buy Decisions: Factors influencing Make Or Buy Decisions-cost, quality, capacity core v/s noncore, management strategy. Evaluation of performance of Materials function: cost, delivery, quality, inventory turnover ratio methodology of evaluation, Use of ratios and analysis like FSN: Fast slow, Nonmoving, HML-High Medium, Low, XYZ. Materials Management in JIT Environment

#### Recommended Readings:

1. Saxena, J.P., Warehouse Management and Inventory Control, Vikas Publication
2. Bose, C., Inventory Management, PHI
3. Mahadevan, B., Operations Management: Theory and Practice, Pearson Education.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.



## **Supply Chain Analytics**

### **Course Code: 21IME24EO2**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After completing the course students would be able to:

- CO1. Cope with ever increasing amounts of data and information generated in all kinds of formats and representations, both internally and externally of supply chain.
- CO2. Acquire more knowledge of their customers, of their economic environment and of their own internal operations
- CO3. Take full advantage of available data for making smarter decisions, for creating value, and for making better use of resources in Supply chain management
- CO4. Support business insights and to move to fact-based management by relying on data and on supply chain analytics.

#### **UNIT-I**

Warehousing Decisions: Mathematical Programming Models, P-Median Methods, Guided LP Approach, Balmer- Wolfe Method, Greedy Drop Heuristics, Dynamic Location Models, Space Determination and Layout Methods

#### **UNIT-II**

Inventory Management: Inventory aggregation Models, Dynamic Lot sizing Methods, Multi-Echelon Inventory models, Aggregate Inventory system and LIMIT

#### **UNIT-III**

Transportation Network Models, Notion of Graphs, Minimal Spanning Tree, Shortest Path Algorithms, Maximal Flow Problems, Multistage Trans-shipment and Transportation Problems, Set covering and Set Partitioning Problems, Traveling Salesman Algorithms, Advanced Vehicle Routing Problem Heuristics, Scheduling Algorithms-Deficit function Approach and Linking Algorithms

#### **UNIT-IV**

Analytic Hierarchy Process, Data Envelopment Analysis, Risk Analysis in Supply Chain, Measuring transit risks, supply risks, delivering risks, Risk pooling strategies, Fuzzy Logic and Techniques-Application in SCM

#### **Recommended Readings:**

1. Sunil Chopra and Peter Meindel. Supply Chain Management: Strategy, Planning, and Operation, Pearson Education.
2. Jeremy F. Shapiro. Modeling the Supply Chain. Duxbury Thomson Learning
3. D. Simchi-Levi, P. Kaminsky, E. Simchi-Levi, and Ravi Shankar, Designing and Managing the Supply Chain concepts, Strategies and Case studies, Third Edition, Tata McGraw Hill, New Delhi
4. D. Simchi-Levi, P. Kaminsky, E. Simchi-Levi, Managing the supply chain: the definitive guide for the business professional. McGraw-Hill.
5. Sridhar Tayur, Ram Ganeshan, Michael Magazine (editors). Quantitative Models for Supply Chain Management. Kluwer Academic Publishers
6. Hyndman, R. J., and Athanasopoulos, G., Forecasting: principles and practice, Online Open Access Textbooks
7. James, G., Witten, D., Hastie, T., and Tibshirani, R., An introduction to statistical learning: with application in R, New York: Springer
8. Makridakis, S., Wheelwright, S. C., and Hyndman, R. J., Forecasting methods and applications. John Wiley and Sons.
9. Janat Shah, Supply Chain Management, Pearson Education.
10. Nahmias, S., Production and operations analysis, McGraw-Hill/Irwin, Sixth Edition.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Technology Management**

### **Course Code: 21IME24E03**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After completing the course students would be able to:

- CO1. Appreciate the role of technology, innovation and new product management in both corporate and public sector.
- CO2. Emphasize on strategic aspects of decision making involved in process and technology choices, investment options, level of technology.

#### **UNIT I**

Introduction: Definition and Characteristics of Technology, Market Based and Resource Based view, Concept and significance of management of technology, Dynamics of Technological Change: Forms of technological change, Process of Technological Change; Innovation: Components of Innovation, Innovation Dynamics at the Firm Level, recent developments in Technological environment - Globalization, Time Compression, Technology integration, Induced and Autonomous changes in the Technological environment, Competitive advantages through new technologies.

#### **UNIT II**

Technology supply and Research and Development Management: Sources of technology, Process of new product development; managing hi-tech products: Strategy to avoid product failure in market. Principles and Process of Product Development; Managing Rand D Organization –issues and recent trends, Linkage between technology, development and competition, management of Intellectual Property Rights in context of technology management, strategic issues in managing IPR

#### **UNIT III**

Technological Forecasting: Meaning, significance of Technology forecasting, techniques of Technology forecasting: Exploratory and normative technique; Process and application of techniques like Delphi, Growth Curves, S- curve, Pearl Curve, Gompertz curve: Relevance Tree, Morphological Analysis, Mission Flow Diagram

#### **UNIT IV**

Meaning and Importance of Technology Intelligence; Technology Strategy: Meaning and Key Principles Underlying Technology Strategy, framework for formulating technology strategy Technology Strategy Types; Linkage of technology strategy with business strategy, Issues in technology strategy

#### **Recommended Readings:**

1. Narayanan, V. K., Managing Technology and Innovation for Competitive Advantage, Pearson Education.
2. Trott, Innovation Management and New Product Development, Pearson Education.
3. Khalli, T., Management of Technology, McGraw-Hill
4. Betz. F., Strategic Technology Management, McGraw-Hill
5. Lowell W. S., Managing Technology – The Strategic View, McGraw Hill.
6. Schilling Strategic Management of Technological Innovation, McGraw-Hill

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Applied Multivariate Analysis**

### **Course Code: 21IME24EB1**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

#### **Course Outcomes**

After completing the course students would be able to:

CO1: understand multivariate data structure, multinomial and multivariate normal distribution

CO2: apply Multivariate analysis of variance (MANOVA) of one and two- way classified data.

#### **UNIT-I**

Multivariate Analysis: Concept, the variate, Measurement scales, Measurement error, Methodology of Model Building. Multivariate Analysis of Variance: One independent variable at two levels and one dependent variable, two-group MANOVA, Multiple-group MANOVA, MANOVA for two independent variables or factors. Repeated Measure Analysis of Variance: Between-subject and within-subject factors and designs, univariate and multivariate approaches to repeated measure analysis.

#### **UNIT-II**

Principal Components Analysis: Geometry of principal components analysis, analytical approach, issues relating to the use of principal components analysis, use of principal components scores. Factor Analysis: Basic concepts and terminology of factor, objectives of factor analysis, geometric view of factor analysis, factor analysis techniques-principal components factoring (PCF), principal axis factoring, and factor analysis versus principal components analysis, factor rotation, and factor scores.

#### **UNIT-III**

Discriminant Analysis: Geometric view, analytical approach, classification methods, Fisher's linear discriminant, Mahalanobis distance. Canonical Correlation: Geometry of canonical correlation, analytical approach, canonical variates and the canonical correlation, statistical significance tests for the canonical correlations, interpretation of the canonical variates, practical significance of the canonical correlation.

Cluster Analysis: Hierarchical clustering, Non-hierarchical Clustering.

#### **UNIT-IV**

Structural Equation Modeling: Path Analysis, Confirmatory Factor Analysis, Structured Means Models.

#### **Recommended Readings:**

1. Tabachnick, Using Multivariate Statistics, Pearson Education.
2. Structural Equation Modeling: Path Analysis, Confirmatory Factor Analysis, Structured Means Models.
3. Tinsley, Harward E and Brown Stered D., Handbook of Applied Multivariate Statistical and Mathematical Modelling, Academic Press.
4. Morrison D F., Multivariate Statistical Analysis, McGraw Hill.
5. Overall J E and Klett C., Applied Multivariate Analysis, McGraw Hill.
6. Hair, Anderson, Tatham and Black. Multivariate Data Analysis, Pearson Education.
7. Nargundlar, R., Marketing Research, Tata McGraw Hill.
8. Johnson Richard A and Wichern Dean W., Applied Multivariate Statistical Analysis, Pearson Education

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

**Market Microstructure**  
**Course Code: 21IME24EB2**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

**Course Outcomes**

After completing the course students would be able to:

CO1: understand problem of Economic Organization, Organizational Objectives, and Transaction cost analysis.

CO2: understand the mechanism of price for coordination and motivation

CO3: understand the employment and compensation problems

**UNIT-I**

Economic Organization and Efficiency: Concept and rationale of organization, Organization and Efficiency, The problem of Economic Organization, Organizational Objectives, and Transaction cost analysis.

**UNIT-II**

Use of Price for coordination and Motivation, Neoclassical Model and theories of Organization, Market failure and Organization; Coordination: Market and Management, Price and coordination, management, Decentralization and the means of coordination.

**UNIT-III**

Bounded Rationality and Private Information, Motivation: Contracts, Information, and Incentives, Moral Hazard and Performance Incentives, Moral hazard in Organization, Controlling Moral Hazard.

**UNIT-IV**

Employment Policy and Human Resource Management, Internal Labour Market, Critique of Classical Theories of Employment, Job Assignments and Promotions, Compensation and Motivation: Implicit Incentive Pay, Performance Evaluation, Job Design, Incentive Pay for Groups.

**Recommended Readings:**

1. Paul Milgrom and John Roberts, Economics, Organization and Management, Prentice Hall.
2. Luis M.B. Cabral, Industrial Organization, Jaico Publishing House.
3. Sengupta, D.N. and Anadiya Sen, Economics of Business Policy, Oxford University Press.
4. Luis M.B. Cabral, Introduction to Industrial Organization, Cambridge Mass: The MIT Press.
5. Carlton, D. W. and J.M. Perloff, Modern Industrial Organization, Warper Collins.
6. Caves, R.E., Multinational Enterprise and Economic Analysis, Cambridge University Press.

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section A shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section B shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

## **Economics of Business Strategy**

**Course Code: 21IME24EB3**

External Marks: 80  
Internal Marks: 20  
Time Allowed: 3 Hours

### **Course Outcomes**

After completing the course students would be able to:

- CO1. Use principles of economics and microeconomic theory to analyze strategic issues faced by managers as strategists in modern business enterprises.
- CO2. Appreciate the inherent strengths and limitations of using economic theory in managing a business.
- CO3. Have an understanding through use of economic theory as to why business follows particular strategic decisions in different industries.
- CO4. Demonstrate the ability to articulate and assess problems based on the modelling framework used in the course to appreciate a strategy/structure relation.

### **UNIT-I**

Theory of the Firm: Its rationale, Objectives, Boundary, Change in boundary (Mergers and acquisitions), Resource Based view of Firm, Firm as the source of Profit, Vertical Integration and Conglomerate diversification, Internationalization.

### **UNIT-II**

Architecture: Internal and external architecture, designing and management of architecture, Evaluation of performance, corporate Governance, Reputation, Knowledge, Rent Generation and Management.

### **UNIT-III**

Competitive Sustainability: Origin of Competitive Advantage, Creative Destruction, Innovation, Growth, Changing Product Portfolio, entrepreneurship etc.

### **UNIT-IV**

Public Policy: Regulation and Privatization, Competition law, Competition Commission of India.

### **Recommended Readings:**

1. Andreu Mas- Colell, Michael D. Whinston & Jerry R. Green, Microeconomic Theory, Oxford University Press.
2. Trimorthy C. G. Fisher & Robert G. Waschik, Managerial Economics: A Game Theoretic Approach, Routedge.
3. Paul Milgram & John Roberts, Economics, Organization & Management, Prentice Hall.
4. D.N. Sengupta & Anandya Sen., Economics of Business Policy, Oxford University Press.
5. Steven E Landsberg, Price Theory & Application, Dryden.
6. Walter Nicholson, Microeconomic Theory, Thomson.

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