

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

MBA PROGRAMME

(Revised Curriculum - 2018)

Objective

To conduct business and industry - oriented MBA Programme following AICTE Model Curriculum for Management (MBA & PGDM), 2018.

Course

- Two - Year full-time MBA course (Four - Semester).
- Minimum number of class room contact teaching for MBA/PGDM programme should be 96 credits (one credit equals 10 hours) and Internship / Project should be 06 credits i.e., Total 96 + 06 = 102 credits.
- Specialization: Students can opt for any two functional specializations (One Major Area and one Minor Area) from Marketing, Finance, HRM, Operations Management, Healthcare Management, MIS and Business Analytics
- Each Paper = 4 credits (40 contact hours), 6 Papers / Semester
- Marks per paper: 100 (70 - University, 30 - College)

Course Structure

➤ Regular Course

| Semester | Paper | Credit (1=4 credit) | Contact Hrs. (1 = 10 hrs.) |
|----------------------|-----------|------------------------|-------------------------------|
| I (C*) | 6 | 24 | 240 |
| II (C*) | 6 | 24 | 240 |
| III (2 C*+4 E**) | 6 | 24 | 240 |
| Internship/Project # | 2 | 6 | 60 |
| IV (6 E**) | 6 | 24 | 240 |
| Course Total | 26 | 102 | 1020 |

(# Project: Project Paper + Presentation + Viva)

(C*: CORE PAPERS/E**: ELECTIVE PAPERS)

- **On - Line Courses** (Non-credit, Paper & Marks to be mentioned in the Mark sheet)
 - Total : 4(1/Semester)
 - Weightage : 4 Credits / Paper = 04 X 4 = 16 credits
 - Courses (any 4): Environment Sciences, Indian Society & Culture, Indian Constitution, Entrepreneurship, English Communication, Data Mining, E-Commerce, Agri-Business, Hospitality Management, Small Business Management, Corporate Social Responsibility.

- **Total Credits:**

| | | |
|----------------------|---|-----|
| Regular | : | 102 |
| On-Line (Non-Credit) | : | 16 |

Session

- July - December (Odd Semesters / 1st& 3rd)
- January - June (Even semesters / 2nd& 4th)
- Class / Day : 5 hrs / Day (5 days week)
- Project Work : after 2ndSem Examination, June & July (8 Weeks)

Examination System (Semester - Wise)

- Total Marks = 100 (University - 70, College - 30)
- Internal (College level) : Weightage : 30 (20-Class Test, 10-Presentation & Viva)
- Paperwise Class Test = 2 Tests / every Six weeks
- Average of 2 internal tests (2 components - Test, Presentation& Viva)
- External (University Level) : 70 (20 = MCQ, 20 = Short Q, 30 = Analytical Q and Cases)
- Semester Grade Point Average : SGPA
- Yearly Grade Point Average: YGPA
- Degree Grade Point Average : DGPA
- Odd Semester (1st& 3rd) Examination : 1st Week of December
- Even Semester (2nd& 4th) Examination : 1st Week of May
- Project Marks (100) : Project Report (50), Presentation (30), Viva (20)
- Passmarks : 40 per paper, 50% aggregate

Teaching Methodology

Lecture, Discussion, Presentation, Case Studies, Group Task, Assignments, Projects, Special Lectures by industry professionals.

Internship / Project

Six to Eight weeks Internship Project in industry. Students will be required to submit a Project Report on any area of Elective courses (**Finance, Marketing, HRM, Operations Management, Business Analytics, MIS, Healthcare Management**) under the Faculty guidance. The Project will be examined on Project Report, Presentation and Viva.

General Guidelines

- ❖ This MBA curriculum will be applicable from the academic year 2018 – 19.
- ❖ All rules and regulations regarding admission, examination, registration, migration and others shall be according to MAKAUT norms.

CURRICULUM

Core Courses (Six/ Semester)

Semester - I

| | |
|----------|---|
| MB - 101 | Managerial Economics (Micro) |
| MB - 102 | Organizational Behaviour |
| MB - 103 | Business Communication |
| MB - 104 | Legal and Business Environment(Micro and Macro) |
| MB - 105 | Indian Ethos and Business Ethics |
| MB - 106 | Quantitative Techniques |

Semester - II

| | |
|----------|---|
| MB - 201 | Indian Economy and Policy |
| MB - 202 | Financial Reporting,Statements and Analysis |
| MB - 203 | Marketing Management |
| MB - 204 | Operations Management |
| MB - 205 | Management Information System |
| MB - 206 | Human Resource Management |

Semester - III

Core Papers:

| | |
|----------|---|
| MB - 301 | Entrepreneurship and Project Management |
| MB - 302 | Corporate Strategy |

Elective Papers: Two from any one Functional Area (Major) and two from a different Functional Area (Minor)

FM/ MM/HR/OM/BA/ MIS/ HCM- 301
FM/ MM/HR/OM/BA/ MIS/ HCM - 302
FM/ MM/HR/OM/BA/ MIS/ HCM - 303
FM/ MM/HR/OM/BA/ MIS/ HCM - 304

MB - 303 Internship Project and Viva Voce

Semester - IV

Elective Papers (Four from Major Functional Area and Two from Minor Functional area) **

FM/ MM/HR/OM/BA/ MIS/ HCM - 401

FM/ MM/HR/OM/BA/ MIS/ HCM - 402
 FM/ MM/HR/OM/BA/ MIS/ HCM - 403
 FM/ MM/HR/OM/BA/ MIS/ HCM - 404
 FM/ MM/HR/OM/BA/ MIS/ HCM - 405
 FM/ MM/HR/OM/BA/ MIS/ HCM - 406

****The Major and Minor Functional areas will be same as chosen in the 3rd Semester.**

Elective Papers for Third Semester

Functional Specialization (3rd Semester)

| MARKETING | | OPERATIONS | |
|-----------|----------------------------------|------------|-------------------------------------|
| CODE | COURSE NAME | CODE | COURSE NAME |
| MM 301 | B2B MARKETING | OM 301 | SUPPLY CHAIN & LOGISTICS MANAGEMENT |
| MM 302 | DIGITAL & SOCIAL MEDIA MARKETING | OM 302 | OPERATIONS STRATEGY |
| MM 303 | IMC/ PROMOTION STRATEGY | OM 303 | QUALITY TOOLKIT FOR MANAGERS |
| MM 304 | MARKETING RESEARCH | OM 304 | PRICING & REVENUE MANAGEMENT |

| FINANCE | | HUMAN RESOURCE | |
|---------|-----------------------------|----------------|---------------------------|
| CODE | COURSE NAME | CODE | COURSE NAME |
| FM 301 | TAXATION | HR 301 | TEAM DYNAMICS AT WORK |
| FM 302 | PROJECT APPRAISAL & FINANCE | HR 302 | HR METRICS AND ANALYTICS |
| FM 303 | BEHAVIORAL FINANCE | HR 303 | CROSS CULTURAL MANAGEMENT |
| FM 304 | CORPORATE FINANCE | HR 304 | ORGANIZATIONAL DESIGN |

| MIS | | BUSINESS ANALYTICS | |
|---------|------------------------------------|--------------------|----------------------|
| CODE | COURSE NAME | CODE | COURSE NAME |
| MIS 301 | DATA MINING FOR BUSINESS DECISIONS | BA 301 | DATA MINING |
| MIS 302 | E-COMMERCE & DIGITAL MARKETS | BA 302 | MARKETING ANALYTICS |
| MIS 303 | MANAGING SOFTWAREPROJECTS | BA303 | BUSINESS FORECASTING |
| MIS 304 | DATA SCIENCE USING R | BA 304 | DATA SCIENCE USING R |
| | | | |

Elective Papers for Fourth Semester

Functional Specialization (4th Semester)

| MARKETING | | OPERATIONS | |
|------------------|--|---------------------------|---|
| CODE | COURSE NAME | CODE | COURSE NAME |
| MM 401 | CONSUMER BEHAVIOUR | OM 401 | SALES & OPERATIONS PLANNING |
| MM 402 | RETAIL MANAGEMENT | OM 402 | BEHAVIORAL OPERATIONS MANAGEMENT |
| MM 403 | SALES & DISTRIBUTION MANAGEMENT | OM 403 | OPERATIONS RESEARCH APPLICATIONS |
| MM 404 | SERVICE MARKETING | OM 404 | SUPPLY CHAIN ANALYTICS |
| MM 405 | PRODUCT & BRAND MANAGEMENT | OM 405 | MANAGEMENT OF MANUFACTURING SYSTEM |
| MM 406 | INTERNATIONAL MARKETING | OM 406 | SOURCING MANAGEMENT |
| FINANCE | | HUMAN RESOURCE | |
| CODE | COURSE NAME | CODE | COURSE NAME |
| FM 401 | INVESTMENT ANALYSIS & PORTFOLIO MANAGEMENT | HR 401 | MANPOWER PLANNING RECRUITMENT & SELECTION |
| FM 402 | MANAGING BANKS & FINANCIAL INSTITUTIONS | HR 402 | EMPLOYEE RELATIONS&LABOUR LAWS |
| FM 403 | MERGERS, ACQUISITION & CORPORATE RESTRUCTURING | HR 403 | COMPENSATION & BENEFITS MANAGEMENT |
| FM 404 | FINANCIAL DERIVATIVES | HR 404 | PERFORMANCE MANAGEMENT SYSTEMS |
| FM 405 | INTERNATIONAL FINANCE | HR 405 | STRATEGIC HRM |
| FM 406 | FINANCIAL MARKETS & SERVICES | HR 406 | INTERNATIONAL HRM |
| MIS | | BUSINESS ANALYTICS | |
| MIS 401 | IT CONSULTING | BA 401 | DATA VISUALIZATION FOR MANAGERS |
| MIS 402 | MANAGING DIGITAL PLATFORMS | BA 402 | BIG DATA TECHNOLOGY |
| MIS 403 | STRATEGIC MANAGEMENT FOR IT | BA 403 | STATISTICS FOR BUSINESS ANALYTICS |
| MIS 404 | RELATIONAL DATABASE MANAGEMENT SYSTEM | BA 404 | DATABASE MANAGEMENT SYSTEM |
| MIS 405 | MANAGEMENT OF INFORMATION TECHNOLOGY | BA 405 | DATA ANALYTICS USING PYTHON |
| MIS 406 | MANAGING DIGITAL INNOVATION & TRANSFORMATION | BA 406 | HR METRICS AND ANALYTICS |

FIRST SEMESTER

MB 101: MANAGERIAL ECONOMICS (MICRO)

MODULE I

1. Introduction to Managerial Economics [2L]

- (a) Basic problems of an economic system
- (b) Goals of managerial decision making
- (c) Resource allocation using PPC

2. Demand Analysis [10 L]

- A. Demand Functions - Law of Demand, Explaining the law of demand, Violations of the Law of Demand, Shifts in Demand; Elasticity of Demand: Price Elasticity (at a point and over and interval), Factors affecting price elasticity, Price elasticity and Change in Total Revenue, AR, MR and Price elasticity, Range of Values of Price Elasticity; Income Elasticity, Inferior, Superior and Normal goods, Income Elasticity and Share in Total Expenditure; Cross-Price Elasticity, Substitutes and Complements
- B. Indifference curves, budget line and consumer equilibrium
- C. Introduction to methods of demand estimation (concepts only)

3. Production and Cost Analysis [14L]

- A. Production Function, Short Run and Long Run, Production with One Variable Input, Total Product, Average and Marginal Products, Law of Variable proportions, Relationship between TP, AP and MP.
- B. Short Run Costs of Production, Fixed and Variable Costs, Short Run Total, Average and Marginal Cost and Relationship between them, Short Run Cost Curves, Relationship between AVC, MC, AP and MP; Long run cost curves, Relationship between LAC and SAC, Economies of Scale and Scope.
- C. Production with Two Variable Inputs, Isoquants - Characteristics, Marginal Rate of Technical Substitution, Laws of Returns to Scale, Isocost Curves, * # Finding the Optimal Combination of Inputs, Production of a given output at Minimum Cost, Production of Maximum Output with a given level of Cost, Expansion Path, Finding the Long Run Cost Schedules from the Production Function,
- D. Law of supply, elasticity of supply, market equilibrium, changes in equilibrium.

MODULE II

4. Alternate Goals of Managerial Firms

[2 L]

- (A) Profit maximization
- (B) Revenue maximization
- (C) Managerial utility maximization

5. Managerial Decision Making under Alternative Market Structures

[6 L]

- A. Characteristics of Perfect Competition, #Profit Maximization in Competitive Markets, Output Decision in the Short Run, Shut Down Point, Short Run Supply for the Firm and Industry; Output Decision in the Long Run, Break Even Point, Long Run Supply for the Perfectly Competitive Industry
- B. Price and output decision under different market structure - Monopoly, Monopolistic Competition, Oligopoly - cartel, price leadership.

6. Pricing Decisions

[6 L]

- A. Price Discrimination under Monopoly, Transfer Pricing.
- B. Market Failure
- C. Game theory & Asymmetric information

Suggested Readings:

1. Damodaran, Suma - Managerial Economics - Oxford University Press
2. Lipsey & Chrystal - Economics - Oxford University Press
3. Peterson & Lewis - Managerial Economics - Pearson Education.
4. Pindyck and Rubinfeld - Micro Economics - Pearson Education
5. H.L. Ahuja - Managerial Economics, S. Chand
6. D.N. Dwivedi - Managerial Economics, Prentice Hall.

MB 102: ORGANIZATIONAL BEHAVIOUR

MODULE I

- A. **OB - Overview** - Meaning of OB, Importance of OB, Field of OB, Contributing Disciplines, Applications in Industry. [2L]

- B. **Personality**- Meaning of Personality, Determinants of Personality, Theories of Personality, Measurement of Personality, Development of Personality [6L]
- C. **Perception** - Process and Principles, Nature and Importance, Factors Influencing, Perception, Perceptual Selectivity, Social Perception, Fundamentals of Decision making. [4 L]
- D. **Work Motivation** - Approaches to Work Motivation, Theories of Motivation - Maslow's Hierarchy of Need Theory, Alderfer's ERG Theory, Herzberg's Motivation-Hygiene Theory, McClelland's Achievement - Motivation Theory, McGregor's Theory X & Y, Vroom's Expectancy Theory, Porter Lawler Expectancy Model [6L]
- E. **Attitudes and Job Satisfaction** - Sources of Attitudes, Types of Attitudes, Attitudes and Consistency, Cognitive Dissonance Theory, Attitude Surveys. [2L]

MODULE -II

- F. **Organization** - Mission, Goals, Characteristics, Types, Organizational Theory- Classical Theories: Scientific Management, Administrative Principles, Bureaucracy, Human Relation Approach, Modern Theories: System Approach, Contingency Approach, Quantitative Approach, Behavioral Approach, Managing Organizational Culture. [6L]
- G. **Group Behavior** - Characteristics of Group, Types of Groups, Stages of Development, Group Decision-making, difference work group and work team, Why work Teams, Work team in Organization, Team Building, Organizational Politics. [4L]
- H. **Leadership** - Leadership Theories, Leadership Styles, Skills and influence process, Leadership and power, Examples of Effective Organizational Leadership in India, Cases on Leadership, Success stories of today's Global and Indian leaders. [4L]
- I. **Conflict in Organization** - Sources of Conflict, Types of Conflict, Conflict Process, Johari Window, Conflict Resolution, Cases on Conflict Resolution. [2L]
- J. **Organizational Change** - Meaning and Nature of Organizational Change, Types of Organizational Change, Forces that acts as stimulant to change. Resistance to change, How to overcome resistance to change, Approaches to managing Organizational Change, Kurt Lewin's three Step model, Action research model, Kotter's eight step model. [4L]

Suggested Readings:

1. Robbins, S.P. Judge, T.A. & Sanghi, S.: Organizational Behaviour, Pearson
2. Luthans, Fred: Organizational Behaviour, McGraw Hill
3. Newstrom J.W. & Devis K.: Organizational Behaviour, McGraw Hill
4. Aswathappa ,K : Organisational Behaviour ,Himalaya Publishing House
5. Shukla, Madhukar : Understanding Organizations - Organizational Theory & Practice in India, Prentice Hall
6. Sekharan, Uma: Organisational Behaviour , The Mc Graw -Hill Companies

MB 103: BUSINESS COMMUNICATION

Module I:

1. **Principles of Communication** - Definition, Purposes, Types, Process, Models and Barriers [2L]
2. **Verbal and Non Verbal Communication** - Presentation Skills (Planning and Preparation/ Using Visual Aids/ Delivery), Individual and Team Presentations, Public Speaking, Listening and Feedback, Body Language [4L+6 P]
3. **Written Communication** - Stages of Writing, Composing Business Messages, Preparing Notes, Style, Punctuation, Using simple words, Proof Reading. [4L]
4. **Report Writing** - Report Planning, Types of Reports, Developing an outline, Nature of Headings, Ordering of Points, Logical Sequencing, Graphs, Charts, Executive Summary, List of Illustration, Report Writing. [4L]

Module II:

5. **Internal Communication** - Circulars, Notices, Memos, Agenda and Minutes [4L + 2P]
6. **External Communication** - Resume/CV, Using Facsimiles (Fax), Electronic Mail, Handling Mail [4 L]
7. **Writing Business Letters** - Formats, Styles Types - Request, Enquiry, Placing Order, Instruction, Action, Complaint, Adjustment, Sales, Reference, Good News & Bad News, Acknowledgement [2L + 4P]
8. **Handling Business Information** - Annual Report, House Magazine, Press Release, Press Report [2 L + 2P]

Suggested Readings:

1. Monipally: Business Communication, Tata McGraw Hill
2. Business Communication Essentials (6th Edition) by Courtland L. Bovee & John V. Thill, Pearson
3. Business English: A Complete Guide for All Business and Professional Communications by Prem P. Bhalla; UBS Publishers
4. The Effective Presentation: Talk your way to success by Asha Kaul; SAGE
5. Madhukar: Business Communications; Vikas Publishing House
6. Senguin J: Business Communication; Allied Publishers

MB 104: LEGAL AND BUSINESS ENVIRONMENT
(MICRO & MACRO)

Module I: Legal Environment

1. **Legal Aspects of Business** - Society, State and Law, Enforceability of Law, Mercantile Law. [2L]
2. **Indian Contract Act, 1872** - Contract defined, Elements of valid contract, Classification of contracts, Offer and acceptance, Consideration, Capacity to contracts, Free consent, Legality of object and consideration, Illegal agreements, Termination of contracts, Breach of contract, Indemnity and guarantee, Laws of agency [6L]
3. **Sale of Goods Act, 1930** - Classification of goods, Conditions & Warranties, Passing of ownership rights, Rights of an unpaid seller, Remedies for breach of Contract of Sale of Goods. [4L]
4. **Negotiable Instruments Act, 1881** - Definition and characteristics of different types of negotiable instruments, Parties to a negotiable instrument and their capacity, Dishonour of cheques, Discharge from Liability, Crossing of cheques, Bank drafts and Banker's cheques. [4L]
5. **Companies Act, 1956** - Nature and kinds of companies, Formation, Memorandum, Articles, Prospectus, Capital - shares, debentures, borrowing powers, minimum subscription, Appointment of Directors; Winding up of companies (Including Amendments) [6L]

6. **Consumer Protection Act, 1986** – Salient features and objectives of the Consumer Protection Act, 1986, Different Consumer redressal Forums, Composition and jurisdiction of district, state and National forum, Mode of complaints, Procedures for disposal of complaints, Penalty. [4L]
7. **Intellectual Property Right-** Laws relating to Patents (Patent Act, 1970), Trademarks (Trademark Act, 1999), Copyright (Copyright Act, 1957), Geographical Indications (Registration & Protection) Act, 1999 [4L]

Module II: Business Environment

8. **Economic Indicators** – Consumer Price Index, Interest Rate, Inflation Rate and its impact on Business, Business Risk [4L]
9. **Intellectual Property Regime** (WTO Guidelines) [2L]
10. **Legislation for Anti competitive and Unfair Trade Practice** – Objectives of MRTP Act, 1969, Objectives of Competition Act, 2002, Monopolistic Trade Practice, Anti competitive Agreement, MRTP vs Competition Act [4L]

Suggested Readings:

1. Sen & Mitra: Commercial law; World Press
2. Pathak: Legal Aspect of Business, TMH
3. Das & Ghosh: Business Regulatory Framework: Ocean Publication, Delhi
4. Pillai & Bagavathi: Business law, S. Chand
5. Dutt & Sundaram: Economic Environment of Business, S. Chand
6. Misra, S. K & Puri, D. K.: Economic Environment of Business, Himalaya Publishing

MB 105: INDIAN ETHOS AND BUSINESS ETHICS

Module – I: Indian Ethos

1. **History & Relevance;** Principles, practiced by Indian Companies; Role of Indian Ethos (Management lessons from Vedas, Mahabharata, Bible, Quran, Arthashastra,) Indian Heritage in Business. Ethics Vs Ethos, Indian Vs Western Management; Work ethos and values for Indian Managers [6L]
2. **Relevance of Value-based Management in Global change-** - impact of Values on stake holders; Trans-cultural human values ; Secular - Vs Spiritual values; value system in work culture [4 L]

3. **Stress Management**, - meditation for mental health, yoga [2 L]
4. **Contemporary Approaches to Leadership** - Joint Hindu Family business; Leadership qualities of Karta [2 L]
5. **Indian systems of learning**- Gurukul system of learning, advantages - disadvantages of Karma, Importance of Karma to managers , Nishkama Karma- laws of Karma ; Law of creation- Law of humility- Law of growth - Law of Responsibility- Law of connection - Corporate Karma Leadership [6 L]

Module - II: Business Ethics

6. **Understanding Business Ethics** - Ethical Values, Myths and Ambiguity, Ethical Codes, Ethical Principles in Business; Theories of Ethics, Absolutism vs. Relativism [6 L]
7. **Approaches to Business Ethics:** Teleological Approach, The Deontological Approach , Kohlberg's Six Stages Of Moral Development (CMD) [4 L]
8. **Managing Ethical Dilemma:** Characteristics, Ethical Decision Making, Ethical Reasoning, The Dilemma Resolution Process; Ethical Dilemmas In Different Business Areas Of Finance, Marketing, HRM and International Business [4 L]
9. **Ethical Culture in Organizations** - Developing Code of Culture in Organization, Ethical and Value-Based Leadership. Role of Scriptures in Understanding Ethics, Ethics in Business, Strategies of Organizational Culture Building, Ethical Indian Wisdom and Indian Approaches towards Business Ethics. [6 L]

Suggested Readings

1. Beteille, Andre - Society and Politics in India, OUP
2. Chakraborty, S. K. - Values and Ethics for Organisations, OUP
3. Fernando, A.C. - Business Ethics - An Indian Perspective, Pearson
4. Gupta, Dipankar - Social Stratification, OUP.
5. Srinivas, M. N.- Social Structure and Caste and Other Essays, OUP.
6. Sandhya, N- Indian Society, Vrindya Publication

MB 106: QUANTITATIVE TECHNIQUES

Module I:

1. **Linear Programming:** Formulating maximization/minimization problems, Graphical solution, Simplex method, Artificial Variables - Big M - Method, Special cases of LP, Duality of LP and its interpretation, Post Optimality/Sensitivity Analysis, Applications of LP. [6L]

2. **Transportation Problems:** Introduction - Mathematical formulation of transportation problem - the Transportation method for finding initial solutions-North West Corner Method - Least Cost Method - Vogel's Approximation method - test for optimality - steps of MODI method-loops in transportation table - Degeneracy. [6L]
3. **Assignment Problems:** Introduction - Mathematical statement of the problem-Hungarian method of solution - Maximization case in assignment problem—unbalanced assignment problem - restrictions on assignment - Travelling salesman problem. [4L]
4. **Theory of Games:** Introduction - Two person zero sum games - Pure strategies - games with saddle points - rules to determine saddle points - mixed strategies - Game without saddle points - the rules of dominance - Methods of solution for games without saddle points – algebraic methods, graphical methods. [4L]

Module II:

5. **Basic Statistics:** Basic Concept (Variables, Population v/s Sample, Central tendency, Dispersion, data Visualization, Simple Correlation and Regression. [4L]
6. **Probability & Distribution:** Probability - Introduction, Rules of Probability, Conditional Probability (Baye's Theorem), Random Variables, Discrete and Continuous Distributions (Binomial, Poisson and Normal), Sampling - Types and Distribution. [6L]
7. **Theory of Estimation:** Estimation - estimation problems, standard error, margin of error, confidence error, confidence interval, characteristics of estimators, consistency unbiasedness, sufficiency and efficiency, most sufficient estimators. Point Estimation and Interval Estimation. [4L]
8. **Statistical Inference:** Hypothesis Testing, Parametric Test - Z, F, t test, ANOVA, Non Parametric Test - Chi square test (goodness of fit, independence of attributes) Spearman's Rank Correlation Coefficient. [6L]

Software Packages to be used in illustrating the above methods

Suggested Readings

1. Statistics by Wayne L. Winston
2. Business Statistics by GC Berry
3. Business Statistics, Problems & Solutions by JK Sharma
4. Operations Research by A Ravindran, Don T Philips and James J Solberg..
5. Operations Research by V K Kapoor
6. Operations Research by S K Kalavathy

SECOND SEMESTER

MB 201: INDIAN ECONOMY AND POLICY

MODULE I

1. Circular Flow of Income

National Income Accounting -terms and concepts, three methods of measuring GDP/GNP (3L)

2. Theory of Income Determination

Simple Keynesian model: Aggregate demand - Aggregate supply method, Savings-investment method

Concepts of multiplier: Autonomous expenditure multiplier, introducing the Government, Government expenditure multiplier, Tax Rate Multiplier, Balanced Budget Multiplier, Open economy - Export and import multipliers.

Paradox of Thrift, Crowding out effect, Business cycle - phases and stabilization (6L)

3. Introduction of Money and Asset Market

IS-LM model, Fiscal policy and monetary policy using IS-LM (4L)

4. Inflation and Unemployment

Concepts of inflation - demand pull and cost push, Stabilization policies

Introduction to Philips curve as relation between inflation and unemployment. (3L)

5. Introduction to Foreign Trade & International Linkages

Concepts of Balance of Payments

Alternative exchange rate systems - fixed, flexible and managed float

Comparative Advantage as basis for trade;

Tariff and non-tariff barriers (4L)

MODULE II

6. Indian Economy - An Overview

Evolution of Indian economy since independence

Liberalization of Indian economy since 1991 (4L)

7. New Industrial Policy

LPG model, New Industrial Policy (1991) (4L)

8. Banking and Capital Market Reforms

Banking structure in India,
Composition of Indian Capital market,
SEBI and Capital Market Reforms (4L)

9. Monetary and Fiscal Policy Reforms

Composition of Indian money market
Components and Instruments of Monetary policy
Concepts and Management of Deficits (4L)

10. Trade Policy Reforms

Major components of trade policy reforms
Idea of FEMA, NITI AYOOG role and function
Current and capital account convertibility. (4L)

Suggested Readings:

1. Principles of Macroeconomics - SoumyenSikdar, (OUP)
2. Managerial Economics - Suma Damodaran, (OUP)
3. Macroeconomics – Dornbusch , Fischer &Startz (PHI)
4. Economic Environment of Business: S.K. Mishra and V.K. Puri,
5. Indian Economy: Datt & Sundharam,
6. Indian Economy since Independence, Uma Kapilaed.

MB 202: FINANCIAL REPORTING, STATEMENT AND ANALYSIS

MODULE I

1. **Basic Financial Accounting Concept:** Meaning and Scope of Accounting -Definition of accounting-classification of accounting- GAAP- Accounting Concepts and Conventions -Accounting Equation (2L)
2. **Preparation Of Books Of Accounts:** Event-Transaction- Accounting Cycle - Golden Rule- Journal-Ledger-Trial Balance-Final Account (10L)
3. **Basic Cost Accounting Concept-** Cost Concept-Cost Unit- Technique of Costing- Method of Costing- Cost center- Cost Unit- Cost Sheet preparation and Interpretation. (4L)
4. **Introduction to Accounting Standard:** Introduction to Indian GAAP and IndAS- Introduction to IFRS and IAS- Comparative Analysis of Indian GAAP and IndAS. (4L)

MODULE II

5. **Preparation Of Financial Statement:** Trading Account-Profit & Loss Account - Balance Sheet (As per Schedule VI, old & new) with Adjustment Entries - Preparation and Interpretation of Annual Report -Corporate Social Responsibility - Human Resource Accounting-Value Added Statement (10L)
6. **Financial Statement Analysis:** Comparative Statement- Common Size Statement- Trend Analysis- Ratio Analysis-Fund Flow Statement - Cash Flow Statement. (10L)

Suggested Readings:

1. M. Hanif & A. Mukherjee : Financial Accounting. McGraw Hill
2. S. K. Paul: Financial Accounting, New Central book Agency
3. S. P. Jain & K. L. Narang: Cost and Management Accounting. Kalyani Publication
4. P. M. Rao: Financial Statement Analysis and Reporting. PHI
5. T. P. Ghosh, N. Ankarnath, K. J. Mehta & Y. A. Alkafazi: Understanding IFRS Fundamentals, Wiley
6. Tulsian & Tulsian: Corporate Financial Reporting, S. Chand

MB 203: MARKETING MANAGEMENT

MODULE I

1. **Introduction:** Definitions of marketing; Core Concept of Marketing – need, want, demand, offering and branding, value and satisfaction, Evolution of marketing concepts (orientations); Marketing Mix – 4Ps and 4Cs. [2 L]
2. **Marketing Environment:** Major components of Internal Environment, the micro-environment and macro-environment; SWOT Analysis, PEST Analysis [2 L]
3. **Strategy and Planning:** Concept of SBU, Choice of Corporate level Strategy; BCG matrix, Product-Market Grid, Porter’s Five Force Model for Industry Analysis. [4 L]
4. **Market Segmentation, Targeting and Positioning (STP):** Concepts of market segmentation: Various bases for segmentation: Geographic, Demographic, Psychographic (VALS-II) and Behavioural; Targeting: Mass marketing, Segment Marketing, Niche Marketing, Micro Marketing and Customization; Concept of Differentiation and Positioning. [4 L]
5. **Consumer Behaviour and Marketing Research:** A framework of consumer decision making process, overview of major factors influencing consumer behavior; marketing research: Role in decision making, Steps and process of Marketing Research, B2B Marketing. [4 L]

MODULE II

6. **Product:** Product Classification, Service – characteristics and expanded service mix elements; Product Levels, Product Mix, Product Line Management, Product Life Cycle: concept and types, New Product Development. [6 L]
7. **Branding and Packaging:** Purpose of branding; Brand equity; Branding strategies; Purpose of Packaging; Types of Packaging – primary, secondary, shipping packages. [3 L]
8. **Pricing:** Procedure for price setting; Pricing objectives; Cost and Demand consideration; Pricing Methods, Pricing Strategies [3 L]

9. **Marketing Channels:** Channel flows and functions; Channel design decisions; Wholesaling and Retailing, Concept of Supply Chain Management and Logistics Management, Channel Conflict Management [5 L]
10. **Promotion:** Elements of Promotion Mix (Advertising, Sales Promotion, Personal Selling, Direct Marketing, Publicity & PR), 5M model of Advertising, Concept of Digital Marketing; Overview of Selling Process [5 L]
11. **Basic concepts of market potential:** Sales potential/ Market Share and Sales forecast; Methods of Sales forecasting. [2 L]

Suggested Reading:

1. Kotler, P., Keller, K., Koshy, A. & Jha, M. - Marketing Management; Pearson
2. Ramaswamy & Namakumari - Marketing Management; McMillan
3. Saxena, R. - Marketing Management; TMH
4. Kurtz, David L, Boone , Louis E - Principles of Marketing; Thomson
5. Keith Blois – Text Book of Marketing; Oxford University Press
6. Etzel, M.J., Walker, B.W. & W.J. Stanton - Marketing; TMH

MB 204: OPERATIONS MANAGEMENT

MODULE I

- 1. Introduction to Production and Operations Management:** Difference between Manufacturing and Service Operations; Product Process Matrix capacity planning- Responsibilities of Production Manager; Production as a Coordination Function; Production Cycle, Production Planning & Control Concept. (4L)
- 2. Characteristics of Manufacturing Systems:** Classification of Manufacturing Systems with Examples; Differences between Intermittent and Continuous Production (2L)
- 3. Plant Location:** Need for a Good Plant Location; Factors influencing Plant Location – Tangible and Intangible Factors; Economic Survey of Site Selection (2L)
- 4. Plant Layout:** Need for a Good Plant Layout; Characteristics of a Good Layout; Costs associated with Plant Layout; Process Layout vs. Product Layout; Optimization in a Process Layout and Product Layout; Designing Product and Process Layout; Assembly Line Balancing – Concept and Problems; Cellular Manufacturing Concept (6L)
- 5. Maintenance Management:** Types of Maintenance – Breakdown and Preventive Maintenance; Total Productive Maintenance (TPM) (3L)

MODULE II

- 6. Purchase Management:** Purchasing Procedure; Value Analysis; Vendor Selection; Negotiation; Make or Buy decision (2L)
- 7. Inventory Management:** Classification of inventory items – ABC, FSN, VED classification; Introduction to EOQ and EBQ; MRP – Concept, inputs and outputs, benefits, examples; Deterministic demand model-EOQ- Continuous and Periodic review Inventory models; Master Production Schedule and MRP; Concepts of MRP II, JIT and ERP (6L)
- 8. Inspection & Quality Control:** Types of Inspection; Statistical Quality Control – Acceptance Sampling and Control Charts (5L)

9. **Scheduling:** Sequencing - Definition and Assumptions; Sequencing of n jobs on a single machine - Shortest Processing Time, Longest Processing Time, Earliest Due Date and First Come First Serve basis; Sequencing of 2 jobs on 2 machines - Gantt Charts, Limitations of Gantt Charts; Sequencing of n jobs on 2 and 3 machines - Johnson's Rule; Introduction to Project Management - CPM and PERT, Identification and Importance of the Critical Path (6L)
10. **Work Study:** Definition and its Importance; Basic Procedure in Performing a Work Study; Method Study -Objectives and Procedure; Work Measurement-Objectives and Procedure; Concepts of Performance Rating, Basic Time, Allowances and Standard Time (4L)

Suggested Readings:

1. Chary, S.N. - Production and Operations Management; TMH
2. Panneerselvam, R. - Production and Operations Management, PHI
3. Bedi, K. - Production and Operations Management; Oxford University Press
4. Chase, Jacobs, Aquilano and Agarwal - Operations Management for Competitive Advantage; TMH
5. Buffa, E. S. and Sarin, R.K. - Modern Production / Operations Management; John Wiley
6. Collier, Evans and Ganguly - Operations Management; Cengage Learning

MB 205: MANAGEMENT INFORMATION SYSTEM

MODULE I

1. E-commerce / E-business [3L]

Overview, Definitions, Advantages & Disadvantages of E-commerce

Business models of e-commerce: models based on transaction party (B2B, B2C, B2G, C2B, C2C, E-Governance), models based on revenue models

Implementation ecommerce business, online and offline marketing

2. ERP, CRM, SCM [10L]

ERP (Enterprise Resource Planning):

Concepts of ERP, architecture of ERP, Generic modules of ERP, Applications of ERP, concept of XRP (extended ERP)

Features of commercial software like SAP, Oracle Apps, MS Dynamics NAV

CRM (Customer Relationship Management):

Concepts of CRM, Features, application of CRM

Sales force automation

SCM (Supply Chain Management):

Concepts of SCM, drivers of SCM, inbound & outbound

Definition, brief description and applicability of: eProcurement, eTailing, eLogistics, eCollaboration, eIntegration.

Case studies for ERP, CRM, and SCM

3. Data Communication & Networking [4L]

Need for computer networking, components of a data communication system,

Network topology

Types of networks: LAN, MAN, WAN; concepts of Internet, Intranet, Extranet, and WWW.

Network protocols, Network Architecture

MODULE II

4. Threats to Computer Systems and Control Measures [2L]

Concepts of threats: Virus, hacking, phishing, spyware, spam, physical threats (fire, flood, earthquake, vandalism)

Concepts of security measures: firewall, encryption

5. Database Management Systems (DBMS) [e.g. MS-Access/ Oracle/ MS SQL Server / MySQL etc.] [4L+2P]

What is a DBMS; Need for using DBMS. Concepts of tables, records, attributes, keys, integrity constraints

SQL: DDL & DML, DCL concepts, SQL commands [ANSI standard].

6. Data Warehousing and Data Mining [3L]

Concepts of Data warehousing, data mart, meta data, multidimensional modeling, Online Analytical Processing (OLAP), Online Transaction Processing (OLTP), Data mining concepts, knowledge discovery v. data mining, data mining applications.

7. MS Office Applications [12 P]

MS Excel: Graphs and Charts–Calculation of various financial functions Performing Mathematical Calculations (using Formula and Functions), Searching, Sorting and Filtering, Min Media Mode, Reference Operators, Functions: Typing a Function, Creating a Column Chart: Changing the Size and Position of a Chart Saving

MS Access: Tables and Queries, Forms, Relationship

MS Power Point: Introduction–Toolbar, their Icons and Commands– Navigating in Power point–Creation of slides, animation, and templates–Designing Presentations–Slide show controls–Making notes on Pages and Handouts–Printing Presentations–Customizing Presentations–Auto content Wizard.

Suggested Readings:

1. Waman S Jawadekar: Management Information Systems - Text and Cases 3ed. McGraw Hill
2. Mahadeo Jaiswal & Monica Mittal: Management Information Systems, OUP
3. Forouzan: Data Communication & Networking, TMH.
4. Tanenbaum: Computer Networks, Pearson Education
5. Ivan Bayross: SQL & PL/SQL, BPB ISRD, Introduction to Database Management Systems, Tata McGraw Hill
6. Sadagopan: ERP: A Managerial Perspective, Tata McGraw Hill.

MB - 206: HUMAN RESOURCE MANAGEMENT

MODULE I

- 1. Human Resource Management:** Meaning, Scope, objectives, and functions of HRM , HR as a Factor of Competitive Advantage, Structure of HR Department, , Line and staff responsibility of HR Managers, Environmental factors influencing HRM (2L)
- 2. Human Resource Planning:** definition, objective, process of HRP. Supply and Demand Forecasting techniques, Manpower Inventory, Career Planning& Development, Succession Planning, Rightsizing, Restructuring. Human Resource Information System (HRIS) (6L)
- 3. Recruitment and Selection :** Process, Sources, Methods of selection, Interviewing Methods, Skills and Errors. (4L)
- 4. Human Resource Development:** Definition, objective, process of HRD, Assessment of HRD Needs, HRD Methods: Training and Non-Training, Training Process; Designing, Implementation and Evaluation of Training Programmes, Induction Training. Developing Managerial Skills for: team management, collaboration, interaction across business functions, presentation , Negotiation, and Networking (6L)
- 5. Performance Appraisal Systems :** Purpose, Methods, Appraisal instruments, 360 degree Appraisal,HR Score Card, Errors in appraisal, Potential Appraisal, Appraisal Interview. (4L)

MODULE -II

- 6. Compensation Management :** Concepts, Components; System of Wage Payment, job evaluation, wage/ salary fixation, incentives, bonus, ESOPs, Fringe Benefits, Retirement Benefits. Compensation Plans (4L)
- 7. Industrial Relations in India:** Parties; Management and Trade Unions, Industrial Disputes: Trends, Collective Bargaining, Settlement Machineries, Role of Government, Labour Policy in India. (4L)

8. **Workers' Participation in Management:** Concept, Practices and Prospects in India, Quality Circles and other Small Group Activities. (2L)
9. **Discipline Management** : Misconduct, Disciplinary action, Domestic Enquiry, Grievance Handling (4L)
10. **Strategic HRM:** Meaning, Strategic HRM vs Traditional HRM, SHRM Process, barriers to SHRM. Nature of e-HRM, eRecruitment & Selection, e-Performance Management, e-Learning (4L)

Suggested Readings:

1. Agarwala T. - Strategic Human Resource Management, OUP
2. Aswathappa, K. - Human Resource Management, Tata McGraw Hill
3. Jyothi P. & Venkatesh, D.N. - Human Resource Management, OUP
4. Ramaswamy, E.A. - Managing Human Resources, OUP
5. Saiyadain, M.S - Human Resource Management : Tata McGraw Hill
6. Mondal Sabari & Goswami Amal - Human Resource Management: Vrinda Publications

THIRD SEMESTER

MB 301: ENTREPRENEURSHIP & PROJECT MANAGEMENT

MODULE I: ENTREPRENEURSHIP

1. Introduction: Meaning and Concept of Entrepreneurship, Innovation and entrepreneurship, Contributions of entrepreneurs to the society, risk-opportunities perspective and mitigation of risks [2L]
2. Entrepreneurship - An Innovation: Challenges of Innovation, Steps of Innovation Management, Idea Management System, Divergent v/s Convergent Thinking, Qualities of a prospective Entrepreneur [2L]
3. Idea Incubation: Factors determining competitive advantage, Market segment, blue ocean strategy, Industry and Competitor Analysis (market structure, market size, growth potential), Demand-supply analysis [4L]
4. Entrepreneurial Motivation: Design Thinking - Driven Innovation, TRIZ (Theory of Inventive Problem Solving), Achievement motivation theory of entrepreneurship - Theory of McClelland, Harvesting Strategies [2L]
5. Information: Government incentives for entrepreneurship, Incubation, acceleration. Funding new ventures - bootstrapping, crowd sourcing, angel investors, Government of India's efforts at promoting entrepreneurship and innovation - SISI, KVIC, DGFT, SIDBI, Defense and Railways [4L]
6. Closing the Window: Sustaining Competitiveness, Maintaining Competitive Advantage, the Changing Role of the Entrepreneur. [2L]
7. Applications and Project Reports Preparation [4L]

MODULE II: PROJECT MANAGEMENT

8. Definitions of Project and Project Management, Issues and Problems in Project Management, Project Life Cycle - Initiation / Conceptualization Phase, Planning Phase, Implementation / Execution Phase, Closure / Termination Phase [4L]

9. Project Feasibility Studies – Pre-Feasibility and Feasibility Studies, Preparation of Detailed Project Report, Technical Appraisal, Economic/Commercial/Financial Appraisal including Capital Budgeting Process, Social Cost Benefit Analysis [2L]
10. Project Planning – Importance of Project Planning, Steps of Project Planning, Project Scope, Work Breakdown Structure (WBS) and Organization Breakdown Structure (OBS), Phased Project Planning [2L]
11. Project Scheduling and Costing – Gantt chart, CPM and PERT Analysis, Identification of the Critical Path and its Significance, Calculation of Floats and Slacks, Crashing, Time Cost Trade-off Analysis, Project Cost Reduction Methods. [6L]
12. Project Monitoring and Control – Role of Project Manager, MIS in Project Monitoring, Project Audit [2L]
13. Case Studies with Hands-on Training on MS-Project [4L]

Suggested Readings:

1. Innovation and Entrepreneurship by Drucker, P.F.; Harper and Row
2. Business, Entrepreneurship and Management: Rao, V.S.P. ;Vikas
3. Entrepreneurship: Roy Rajeev; OUP.
4. Text Book of Project Management: Gopalkrishnan, P. and Ramamoorthy, V.E.; McMillan
5. Project Management for Engineering, Business and Technology: Nicholas, J.M., and Steyn, H.; PHI
6. Project Management: The Managerial Process: Gray, C.F., Larson, E.W. and Desai, G.V.; MGH

MB 302: CORPORATE STRATEGY

MODULE I:

1. Strategic Management: Objectives, policies, Tools – Balanced Score Card, Strategic Management process. [4L]
2. Environmental Scanning: SWOT Analysis, External Environment Analysis (Economic, Legal, Political, Social, Geographic, Technical); Internal Environment Analysis - Strategic Advantage Factors (Finance, Marketing, Production, HR, R & D, etc.) [4L]

3. Strategic Planning: Corporate; Functional and Managerial Goal Setting; Positioning Organization, Models for Resource Allocation, Environmental Turbulence Strategic Investment, Strategic Entry [6L]
4. Formulating Strategies: Corporate, Administrative/Executive and Operating Levels, Developing Functional Strategies - Production/Operations, Finance, Marketing, HR, Materials, R & D; BCG Matrix, Portfolio analysis. [6L]

MODULE II:

5. Implementation of Strategies: Role of Managers, Leadership, Strategic Control System and Measurement, Structural Implementation, Functional Implementation. [6L]
6. Strategic Actions: Mergers, Acquisitions, Diversification, Joint Ventures, De-Merger, etc. [4L]
7. Evaluation of Strategy: Need, Problems, Criteria for Evaluation (Qualitative/Quantitative), Process of Evaluation [4L]
8. Case studies - Strategic Planning and Management [6L]

Suggested Readings:

1. Corporate Strategies: Banerjee, Bani P.; OUP
2. Crafting the Strategy: Das, Ranjan ;, Tata McGraw Hill
3. Business Policy and Strategic Management: Kazmi, A., Tata McGraw Hill
4. Global Strategic Management: Mellahi, K.,Frynas, J.G.and Finlay, P., OUP
5. Competitive Strategy: Porter, Michael E., The Free Press
6. Discourses on Strategic Management: Roy, Dilip; Asian Books

ELECTIVE PAPERS

SPECIALIZATION: MARKETING

MM 301: B2B MARKETING

MODULE I:

1. Nature of Business Marketing: Business Marketing Concept, Business vs. Consumer Marketing, Economics of Industrial demand, Types of Industrial Markets, Types of Business Customers, Classifying Industrial Products and Services, Business customers' purchase orientations, Organizational Procurement Characteristics, Environment Analysis in Business Marketing. [6L]
2. Organizational Buying Behavior: Organizational Buying Process, Types of purchases/buying situations, Buying Centre Concept, Inter Personal Dynamics of Business Buying Behaviour, Roles of Buying centre, Conflict Resolution in Decision, The Webster and Wind model of Organizational Buying Behaviour, Ethics in Purchasing. [6L]
3. Business Marketing Research: Differences between B2C and B2B Marketing Research, Sales Forecasting Approaches, Top-Down, Bottom-up approaches. [2L]
4. Market Segmentation: Segmenting, Targeting and Positioning of Business Market, Value based segmentation, Model for segmenting the organizational Market. [4L]

MODULE II:

5. Product Policy of established products: Classification of the product types; the life cycle of the product; Management products; Strategies for established products. Product policy of new product development: Strategies for the development of new products; Marketing systems; Marketing of engineering services. [4L]
6. Formulating Channel Strategy: Nature of Business Marketing channels, Intermediaries, Direct and Indirect Channels, Channel Objectives, Channel Design, Managing Channel Members, Selection and Motivation of Channel Members, Channel conflicts [4L]
7. Pricing Strategy: Price Determinants, Factors that Influence the Pricing Strategies, Pricing Methods, concept of learning curves, Pricing Strategies, Pricing Policies, Terms of Payment, Competitive Bidding, Leasing [2L]

8. The Promotional Strategies: Communication Objectives, Role of personal relation, Advertising, Sales Promotion in Industrial Markets, Trade shows and Exhibitions. [2L]
9. Management of Sales Force: Personal Selling, steps involved in B2B personal selling, process of tendering, Key Account Management, Managing the Industrial Sales Force, Organizing and controlling the industrial sales force activity, planning for sales force deployment. [4L]
10. B2B through E-Commerce: Business-to-Business forms of E-Commerce, Models for B2B ecommerce, marketing strategy for the electronic market place. [4L]
11. Case Studies in Indian context only [2L]

Suggested Readings:

1. Industrial Marketing by P. K. Ghosh; Oxford University Press
2. Indian Cases in B2B Marketing by Dilip Sarwate
3. Fundamentals of Business to Business by Coe John; McGraw-Hill Education
4. Business Market Management by Jr. Anderson James C; Pearson
5. Driving Demand: Transforming B2B Marketing to Meet the Needs of the Modern Buyer by Carlos Hidalgo; Palgrave Macmillan
6. The Challenger Sale by Matthew Dixon, Brent Adamson; Penguin

MM 302: DIGITAL & SOCIAL MEDIA MARKETING

MODULE I:

1. Fundamentals of Digital Marketing: concept, history, types, implementation and benefits of digital marketing [2L]
2. Search Engine optimization: concept of Search Engines optimization, how SEO operates, website domain, file name, design layouts, optimized keywords, keyword frequency weightage, prominence, placement of keywords, finding keyword, word stemming, metatag optimization, title optimization, anchor optimization, mobile SEO techniques. [8L]
3. Social Media Marketing: concept, as a marketing tool, importance of social media marketing, Social marketing strategy (SMO) for business, SMO key concepts, business profile creation, brand awareness, social engagement; Viral marketing, tools of measurement of popularity, traffic , analytics and statistics. [8L]

MODULE II:

4. Facebook marketing: overview-types of facebook pages, growth of business through facebook; profile page setup, page navigation, influencer, ad options, page promotion, identity target ,likes philosophy, create and engaging fans, call to action, video promotion, marketing tricks, FB analytics. [8L]
5. Twitter Marketing: Concept, advantages, implementation of twitter; create of twitter account, follower growth, hash tags, sponsor of twitter/hash tags, twitter analytics. [4L]
6. Google+: Concepts, advantages, creating page on Google+, customization, integration with website/blog, increase in followers, promotion and tools. [4L]
7. Linkedin: concept, benefits, promotion and growth of business using linkedin. [4L]
8. Case Study [2L]

Suggested Readings:

1. Understanding Digital Marketing by Damian Ryan , Pearson
2. Fundamentals of Digital Marketing by Puneet Singh Bhatia
3. Digital Marketing cases from India by Rajendra Nargudkar and Romi Sainy
4. Marketing 4.0: Moving from Traditional to Digital by Kotler, Kartajaya, Setiawan
5. Social Media Marketing by Tracy L Tuten and Michel R Solomon by SAGE
6. Social Media: 2017 Marketing Tools for Facebook, Twitter, Linkedin, Youtube, Instagram and Beyond by Mcdonald Jason.

MM 303: IMC/ PROMOTION STRATEGY

MODULE I:

1. Introduction to Integrated Marketing Communication: Definition, features and role of IMC and its relation with marketing program Concept, Evolution of IMC, Reasons for Growth and Features. Promotional Tools for IMC, IMC Planning Process, Communication Process, AIDA and Hierarchy of Effect Model, Establishing Objectives and Budgeting: Determining Promotional Objectives, Sales vs. Communication Objectives, DAGMAR, Problems in Setting Objectives, and Setting Objectives for the IMC Program. [4L]

2. Elements of IMC: Sales Promotion - Different Types of Sales Promotion, Advantages and Disadvantages. Public Relation and Publicity - Types of PR, Process, Advantages and Disadvantages, Types of Publicity, Direct Marketing - Features, Advantages and Disadvantages, Personal Selling - Features, Advantages and Disadvantages, Advertising - Features, Advantages and Disadvantages,, New Trends in IMC, International Media. [6L]
3. Sales Promotion: Definition, Reasons for rapid growth of sales promotion, Objectives of sales promotion, Types of sales promotion, Tools and techniques of consumer and trade promotion with merits and demerits, Role of sales promotion in IMC programme [4L]
4. Public Relations and Corporate Advertising: Definition, New role of PR, Objectives, tools and techniques of public relations with merits and demerits, Corporate advertising- scope and types, role of PR in IMC programme [2L]
5. Evaluation of Promotional Effectiveness: Reasons to measure effectiveness, What, when, where, how to test, Testing methods - pre-testing and post testing techniques, Essentials of effective measures, Problems with current methods, Measuring effectiveness of other promotion [2L]

MODULE II:

6. Advertisement: Introduction to Advertising: History of advertising, Definition, features and role of advertising, Relationship of advertising with other promotional mixes and marketing mix elements, Various forms of Advertising: (national, retail, cooperative, trade, industrial financial, corporate, public services, political) [2L]
7. Advertising Industry: Advertisers, Advertising agencies and support organizations, Types of agencies, Structure, role and functions of ad agencies, Agency compensation and evaluation. [2L]
8. Advertising Planning and Budgeting: Planning process, steps, situation analysis, objective setting, budgeting, developing promotional strategies, implementation and control, Budgeting approaches - different methods, allocation of budget [2L]
9. Designing an Advertisement: Different dimensions, Importance of creativity to advertising, Creative process, developing a creative brief, Message Strategies: Message structure, Message appeals- rational, emotional, Message source-credibility, attractiveness, power. [4L]

10. Execution frameworks: for print and electronic media - copywriting, body copy, headlines, layout, visuals, slogans, logos, signatures, storyboards [2L]
11. Media Strategies: Media planning process, Media mix, Coverage, Reach, Frequency, Impact, Scheduling, Different types of media - television, radio, print, outdoor, characteristic features, advantages and limitations, Factors influencing choice of media flows and functions, Channel design decisions.. [4L]
12. Social Media marketing: Concept, role and features of SMO, SEO, Facebook, Twitter, LinkedIn, youtube as means of marketing communication. [2L]
13. Advertising and Society: Social - social and cultural, Ethical - deceptive, offensive, economical- effect on consumer choice, competition, cost and prices, and Regulatory aspects of advertising - ASCI [2L]
14. Case Study on aspects of Advertising [2L]

Suggested Readings:

1. Contemporary Advertising: Arens W.F.; TMH
2. Advertising and Promotion: Belch G.E. and Belch M.A; TMH
3. Integrated Advertising, Promotion and Marketing Communications: Clow K.E., Baack D.; Pearson
4. Advertising and Integrated Brand Promotion: O'Guinn T. C., Allen C.T.; South Western
5. Ogilvy on Advertising: Ogilvy David; Pan Books
6. Understanding Digital Marketing: Damian Ryan, Pearson

MM 304: MARKETING RESEARCH

MODULE I:

1. Marketing Research: Introduction, Application of research in managerial decision making, Aims, roles, functions and sources of research, Client-user interface - role conflict and resolution [2L]
2. Research Process: Steps in planning - research purpose and objectives, Converting a manager's problem to a researcher's problem, Problem formulation, research design, data collection, analysis, report presentation, Preparation of the research proposal. [4L]

3. Research Design: Types of research - exploratory studies, descriptive studies, causal studies, Types of information needed - behavioural and non-behavioural correlates [4L]
4. Sources of Data: Primary and secondary source (govt., non-govt. and syndicated research), Errors in data collection [4L]
5. Primary Source – Methods of Data Collection: Focus groups, Observations, Case histories; Surveys – survey methods - structured and unstructured, direct and indirect methods, in-depth interviews, panels, interview media: personal, telephone, internet and mail, questionnaire construction and pre-testing, qualitative and quantitative research. [4L]

MODULE II:

6. Measurement and Scaling: Types of scales (data/levels of measurements), nominal, ordinal, interval, ratio scales, Attitude measurement methods - variability methods (paired comparison, ranking, rating, ordered category sorting), Quantitative judgment methods [6L]
7. Sampling: Census vs. sample, Steps in sampling process, Definition of population, frame, unit and element, Types of sampling: Probabilistic and non-probabilistic sampling techniques Determination of sample size [4L]
8. Analysis of Data: Classification of data, Analytical techniques – univariate analysis, hypothesis testing- parametric and non-parametric tests, bivariate analysis. Some multivariate analysis techniques like multiple regression, discriminant analysis, factor analysis, cluster analysis, multi - dimensional scaling and conjoint analysis, forecasting methods (application and interpretation only) [10L]
9. Application Areas: Advertising Sales analysis and forecasting, Case Studies [2L]

Suggested Readings:

1. Research for Marketing Decisions: P. Green and D. Tull and G. Albaum; PHI
2. Marketing Research: Text and Cases; Boyd and Westfall; AIT Bookseller
3. Marketing Research: Luck and Rubin; PHI
4. Marketing Research: D.R. Cooper and P.S. Schindler; TMH
5. Marketing Research: Naresh K Malhotra; Pearson
6. Marketing Research: G C Beri; Tata McGraw Hill

SPECIALIZATION: MANAGEMENT INFORMATION SYSTEM

MIS 301: DATA MINING FOR BUSINESS DECISION

MODULE I:

1. Introduction to Data Mining: Data Mining Concept, Goals, Stages of Mining Process, Applications, Techniques, Knowledge representation methods, Challenges. [4L]
2. Data Preprocessing: Data types, Quality, Descriptive data summarization – central tendency and dispersion measure, Data cleaning, Outlier detection, Data integration and transform, Data reduction. [6L]
3. Association Rule Mining: Market-basket analysis basics, Naïve algorithm, Apriori algorithm, Software for Association Rule Mining. [4L]
4. Classification and Prediction: Decision Tree, Bayesian classification, Rule-based classification, Prediction – Linear Regression [4L]

MODULE II:

5. Data Warehouse and OLAP: Data Warehouse and DBMS, Multidimensional data model, OLAP operations. [6L]
6. Clustering: Basic issues in clustering, Partitioning methods: k-means, Hierarchical methods: distance-based agglomerative and divisible clustering, Cluster Analysis Software. [8L]
7. Data Mining Software and Applications: Text mining: extracting attributes (keywords), structural approaches (parsing, soft parsing), Bayesian approach to classifying text, Web mining: classifying web pages, extracting knowledge from the web, Social impacts of data mining, information privacy and data security, IT Act overview. [6L]
8. Case Study [2L]

Suggested Readings:

1. Tan, Steinbach and Kumar, Introduction to Data Mining, Pearson
2. Han and Camber, Data Mining: Concepts and Techniques, Morgan Kaufmann
3. Foreman, Data Smart: Using Data Science to Transform Information into Insight, John Wiley
4. Dunham, Data Mining : Introductory and Advanced Topics, Pearson

5. Vipin Kumar: Introduction to Data Mining, Pearson
6. Ian, H. Witten, Frank: Data Mining: Practical Machine Learning Tools and Techniques, Elsevier.

MIS 302: E-COMMERCE and DIGITAL MARKETS

MODULE I:

1. E-Commerce /E-Business: Introduction, Advantages and Disadvantages, Benefits, Features, Business models of E-Commerce, Model based on revenue models, Implementation E-Commerce business, Infrastructure Requirement for E-Commerce, Different types of Networking for E-Commerce ,Internet, Extranet and Intranet, Intelligent System, Risk of E-commerce -Overview, Security for E-Commerce, Security Standards, Farewell, Cryptography [8L]
2. M-Commerce: Definition, Classification, Advantages and Disadvantages, Benefits, Pitfalls of M-Commerce, Hand Held Devices, Mobility and Commerce, Mobile Computing, Wireless Web, Payment Mode. [6L]
3. E-Strategy: Overview, Strategic Methods for developing E-Commerce, E-Advertisement, Payment Mode, E-Cheque, E-cash, E-Threats and Protection [6L]

MODULE II:

4. ERP and SCM: Definitions-ERP,CRM,SCM, Concept of ERP, Evolution of ERP, Scope and Problem of ERP selection and Implementation ,Selection of ERP process, Feature of Commercial Software, Concept of CRM, Features ,Applications, SRM portal, SCP tools, SCE, Framework, Internet's Effect on Supply Chain Power, Case Study [8L]
5. E- Marketing/ Digital Marketing: E-shopping, Role, Policies ,Online Marketing and Offline marketing, SEO,SMM,SEM, Meta Tags, Content Marketing, Marketing in Digital Age, Telemarketing, Commercial packages for E-shopping Portal, Case Study [6L]
6. EDI: Introduction, Definition, Features, Benefits, Application, Model, Protocol [4L]
7. Case Study [2L]

Suggested Readings:

1. Dropshipping E-commerce Business Model 2019: Steven Sparrow
2. Electronic Commerce: Gray P. Schneider
3. E-Commerce Website Optimization: Dan Croxen-John, Johann van Tonder
4. Electronics Commerce –Technologies and Applications: Bhaskar Bharat, TMH
5. Frontiers of Electronic Commerce: Kalakota ,Whinston, Pearson Education
6. E-Commerce : Strategy Technologies and Applications: Whiteley, David, TMH

MIS 303: MANAGING SOFTWARE PROJECTS

MODULE I:

1. Project Evaluation and Project Planning: Importance of Software Project Management - Activities Methodologies - Categorization of Software Projects - Setting objectives - Management Principles - Management Control - Project portfolio Management - Cost-benefit evaluation technology - Risk evaluation - Strategic program Management - Stepwise Project Planning [8L]
2. Project Life Cycle: Software process and Process Models - Choice of Process models - mental delivery - Rapid Application development - Agile methods - Extreme Programming - SCRUM - Managing interactive processes [4L]
3. Effort Estimation: Basics of Software estimation - Effort and Cost estimation techniques - COSMIC Full function points - COCOMO II. Parametric Productivity Model - Staffing Pattern [4L]
4. Activity Planning And Risk Management: Objectives of Activity planning - Project schedules - Activities - Sequencing and scheduling - Network Planning models - Forward Pass and Backward Pass techniques - Critical path (CRM) method - Risk identification - Assessment - Monitoring - PERT technique - Monte Carlo simulation - Resource Allocation - Creation of critical patterns - Cost schedules. [6L]

MODULE II:

5. Project Management and Control: Framework for Management and control - Collection of data Project termination - Visualizing progress - Cost monitoring - Earned Value Analysis-

Project tracking - Change control- Software Configuration Management - Managing contracts - Contract Management. [8L]

6. Staffing in Software Projects: Managing people - Organizational behavior - Best methods of staff selection - Motivation - The Oldham-Hackman job characteristic model - Ethical and Programmed concerns - Working in teams - Decision making - Team structures - Virtual teams - Communications genres - Communication plans. [8L]

7. Case Study [2L]

Suggested Readings:

1. Project Management: K. Nagarajan - New Age International Publishers
2. Applied Softer Project Management: Andrew Stellman, Jenifer Greene - O' Reilly Media
3. Software Project Management: Bob Hughes, Mike Cotterell and Rajib Mall:- Tata McGraw Hill, New Delhi.
4. Effective Software Project Management: Robert K. Wysocki - Wiley Publication.
5. Software Project Management: Walker Royce - Addison-Wesley.
6. Managing Global Software Projects: Gopalaswamy Ramesh - McGraw Hill Education (India).

MIS 304: DATA SCIENCE USING R

MODULE I:

1. Programming in R: Basics of R, Conditional and loops, R packages/libraries, Data mining GUI in R, Data structures in R, Exceptions/ debugging in R [4L]
2. Data Wrangling: Reading CSV, JSON, XML, .XLSX and HTML files using R,ETL operations in R, Sorting/ merging data in R, Cleaning data, Data management using dplyr in R [4L]
3. Modeling in R:Linear regression model in R, Multiple linear regressions model, Representation of regression results, Non Linear Regression [10L]

MODULE II:

4. Mining Algorithms using R: Association analysis, Market-based analysis/ rules, Apriori algorithm, Segmentation analysis- types of segmentation, k-means clustering, Bayesian clustering, Principal Component Analysis (PCA) [12L]
5. Time Series Forecasting in R and model deployment: Basics of time series, Components of time series, Time series forecasting, Deploying predictive models [8L]
6. Case Study [2L]

Suggested Readings:

1. R for Data Science – Hadley Wickham and Garrett Grolemund
2. R in Action – Robert Kabacoff
3. R for Everyone: Advanced Analytics and Graphics – Jared P. Lander
4. The R Book – Michael J. Crawley
5. R and Data Mining: Examples and Case Studies – Yanchang Zhao
6. Data Analytics using R - Seema Acharya, Mc. Graw Hill Publication

SPECIALIZATION: FINANCE

FM 301: TAXATION

MODULE I: DIRECT TAX

1. Concepts: Cannons of Taxation, Person, Assessee, Income, Previous Year, Assessment Year, Gross Avoidance, Planning, Exemption, Planning, Exemption, Deduction, Rebate, Relief. [2L]
2. Residential Status and Tax Incidence: Individual and Corporate. [4L]
3. Income Exempted from Tax: Individual and Corporate. [2L]
4. Computation of Taxable Income of Individual, HUF, Firm and Corporate: Heads of Income – Salaries, Income from House Property, Profits and Gains from Business or Profession, Capital Gains, Income from Other sources. Deduction from Gross Total Income – 80CCC, 80D, 80DDB, 80E, 80G, 80GG, 80GGA, 80C, 80U; Set Off and Carry

Forward of Losses – Principles, Meaning, Inter – sources and Inter – head Set Off, Carry Forward and Set Off of Losses under sections 71, 72 and 73. [8L]

5. Computation of Tax for Individual, H.U.F, Firm and Corporate: Rate of Tax and Surcharge Tax, Rebate Tax Management – Submission of Return and Procedure of Assessment, Pan, Tan, Preliminary ideas of Deduction and Collection of Tax at Source, Advance Payment of Tax, Refund of Tax, Minimum Alternate Tax. [6L]

MODULE II: INDIRECT TAX

1. Customs Act and Valuation: Basic Concepts only [2L]
2. Goods and Service Tax: GST in India. Features and Advantages, Structure of GST in India: CGST, SGST, UTGST, IGST, Taxes subsumed by GST, Commodities kept outside the scope of GST. Procedure for Registration; Deemed Registration, Cancellation of Registration, Revocation of Cancellation of Registration. Levy and Collection of Tax under GST: 16 Rates structure of GST, Scope of supply, Composition Scheme under GST [8L]
3. Tax Planning: Scheme of Tax Planning, Tax Planning for Salaries, Tax Planning for Profits and gains of Business or Profession, Tax Planning for Capital Gains. [6L]
4. Case Study [2L]

Suggested Readings:

1. Lal and Vasisht, Direct Taxes, Pearson Education
2. Singahnia, Direct Taxes, Taxman
3. Singhania, Indirect Taxes, Taxman
4. Bhagawati Prasad, Direct tax law and Practice.
5. Gaur and Narang, Income Tax law and Practices, Kalyani Publisher
6. T. B. Chatterjee and V. Jalan, How to handle - GST-TDS and GST-TCS, GST audit, GST Annual Return, Book Corporation

FM 302: PROJECT APPRAISAL and FINANCE

MODULE I:

1. Introduction to Project Finance, Overview and Fundamentals- Concepts, Functions, Types, Advantages and Disadvantages, Parties, Perquisites of Project Finance. [4L]
2. Project Finance Risks and Risk Mitigation- Project Conceptualization Risk, Financial Closure Risk , Project Construction Risk , Political Risk , Market Risk ,Supply Chain Risk, Policy Risk, Exchange Risk, Environmental Risk , Force Majeure. [6L]
3. Sources of Capital- Various sources of debt and equity , Prudence in Mix of Long Term and Short Term Finance ,Forms of Long Term Project Finance ,Forms of Short Term Project Finance , Lease , Role of Non-Banking Finance Companies (NBFC) [6L]
4. Project Selection- Projects Procurement Process, Life - Cycle Costing, Market Analysis , Competencies and Promoter Analysis, Loan Documentation - Infrastructure and Public Private Partnership [6L]

MODULE II:

5. Cost of Project -Project specifications , Estimating Fixed Capital Investment in Project , Estimating Working Capital investment in the project, Means of Financing , Concepts of Depreciation and Amortization [4L]
6. Project Feasibility Analysis - Background , Net Present Value (NPV) , Profit v/s Cash Flow, Discount Rate , Tax-Shield on Interest , Tax-Shield on depreciation ,Internal Rate of Return (IRR) , XIRR , MIRR , Project IRR and Equity IRR , Payback Period , Discounted Payback Period , Economic IRR [6L]
7. Financial Projections-Projected Profit and Loss Account, Projected Balance Sheet, Projected Funds Flow, Project IRR , Equity IRR , Loan Servicing Capability: (a) Interest Coverage Ratio (ICR) (b) Debt Service Coverage Ratio (DSCR) (c) Long Term Debt Service Coverage Ratio (LDR) d) Sensitivity Analysis [6L]
8. Case Study [2L]

Suggested Readings:

1. Project Financing: Asset-Based Financial Engineering-John D. Finnerty, Wiley and Sons
2. Project Finance in Theory and Practice: Designing, Structuring, and Financing Private and Public Projects, Stefano Gatti- Academic Press
3. Principles of Project Finance- E. R. Yescombe,Academic Press
4. Corporate and Project Finance Modeling: Theory and Practice- Edward Bodmer, Wiley and Sons
5. Introduction to Project Finance-Andrew Fight, Elsevier
6. PPP And Project Finance -Das, Prabuddha, McGraw-Hill Education

FM 303: BEHAVIORAL FINANCE

MODULE I:

1. Introduction to the Practical Application of Behavioral Finance: Concept of Behavioral Finance, History, Incorporating Investment Behavior into the Asset Allocation Process. [4L]
2. Investment Decision Cycle: Judgment under Uncertainty [2L]
3. Intro to Neoclassical Economics and Expected Utility Theory-Utility/ Preference Functions: Expected Utility Theory [EUT] [4L]
4. Brief History of Rational Thought: Pascal-Fermat to Friedman-Savage Paradoxes[4L]
5. Prospect Theory :Capital Asset Pricing Model, Misconceptions about Market Efficiency, and Agency Theory Prospect Theory, Framing, and Mental Accounting [4L]
6. Information Screening Biases : Anomalies, Noise Trading, and Limits to Arbitrage [2L]

MODULE II:

7. Information Processing: Bayesian Decision Making, Heuristics and cognitive biases Overconfidence, Emotional Foundations, Implication of Heuristics and Biases for Financial Decision-Making, Implications for Overconfidence for Financial Decision-Making, Individual Investors and the Force of Emotion [6L]

8. Forecasting Biases [2L]
9. Emotion and Neuroscience [4L]
10. Group Behavior: Conformism, Herding, Fatal Attractions [4L]
11. Investing Styles and Behavioral Finance [4L]
12. Case Study [2L]

Suggested Readings:

1. Behavioural Finance Chandra. Prasanna. Mcgraw Hill
2. Behavioural Finance M. M. Sulphey. PHI
3. Understanding Behavioral Finance Lucy Ackert Cengage Learning India
4. Behavioural Finance ,William Forbes, Wiley
5. Behavioral Finance: Psychology, Decision-Making, and Markets ,Richard Deaves , South-Western College Publishing
6. Behavioural Finance, Shuchita Singh Vikas Publishing House

FM 304: CORPORATE FINANCE

MODULE I:

1. Introduction to Financial Management: Scope, Objectives, Functions [2L]
2. Capital Structure: Concepts, Component of Capital, Leverage, Models of Capital Structure [6L]
3. Introduction to Corporate Finance: Meaning of Corporation, Role of Financial Manager, Agency Problem. [2L]
4. NPV as Investment Decision Criteria: Comparing NPV with other methods of Investment Decisions, The problems of multiple rates of Return, Mutually Exclusive Projects, Capital Rationing. [4L]

5. The Investment Decision: The Cash Flow, Equivalent annual Costs, Project Interactions [4L]

MODULE II:

6. Capital Budgeting and Risk: Company and Project Costs of Capital, Measuring Cost of Equity, Cost of Capital, and Risk Adjusted Discount Rate, Sensitivity Analysis, Monte Carlo Simulation, Real Options and Decision Trees [4L]
7. Alignment of Managers and Owners Goal: Practical aspects of Capital Investment Process, Information and Capital Investment, Incentives and their role in agency Problem, Measuring and Rewarding Performance: EVA, Pros and Cons of EVA [4L]
8. Market efficiency and Corporate Financing Basics of EMH, The Anomalies, The lessons for the Corporate Manager [4L]
9. The Financing Decision: The Financing Process, The Financing Mix: Tradeoffs and Theory, The Optimal Financing Mix, The Financing Mix and Choices [4L]
10. The Dividend Decision: Dividend Policy, analyzing Cash Returned to Stockholders, Buybacks, Spinoffs, and Divestitures [4L]
11. Case Study [2L]

Suggested Readings:

1. Brearly, Myers, Mohanty: Corporate Finance, Tata McGraw-Hill
2. Copeland Weston Shastri: Financial theory and Corporate Policies, Pearson Education
3. Damodaran: Corporate Finance, Wiley
4. Ehrhardt and Brigham: Corporate Finance- a Focused approach, Thomson Learning
5. Megginson, Smart and Gitman: Principles of Corporate Finance, Thomson Learning
6. Ross, Westerfield and Jaffe: Corporate Finance, Tata McGraw-Hill

SPECIALIZATION: OPERATIONS MANAGEMENT

OM 301: SUPPLY CHAIN AND LOGISTICS **MANAGEMENT**

MODULE I:

1. Introduction – Value Chain, Value System and Supply Chain, Supply Chain Drivers and Obstacles, Concept of Supply Chain Management (SCM) [4L]
2. Supply Chain Structure – Push-based Supply Chain vs. Pull-based Supply Chain, Trade-off between Push and Pull Strategies, Agile Supply Chain [4L]
3. Supply Chain Strategy – Strategic Decisions in SCM, Relating Supply Chain Strategies with Corporate Strategies, SBU Strategies and Functional Strategies [4L]
4. Role of Sales and Marketing in SCM – Personal Selling in SCM, New Roles for Sales Management, Relationship Marketing in SCM [2L]
5. Operational Aspects in SCM – JIT and Kanban in SCM, Green Logistics, Reverse Logistics, Ethical SCM [4L]
6. Role of Transportation in SCM – Key Role Players in Transportation, Transportation Modes, Performance Characteristics and Selection, Vehicle Scheduling and Routing, Distribution Management [4L]

MODULE II:

7. Sourcing in SCM – Importance of Sourcing in SCM, Buying Decision, Procurement Process, Strategic Sourcing [4L]
8. Supply Chain Planning – Demand Planning, Collaborative Planning, Scope of Planning Initiatives in SCM [2L]

9. Role of Inventory Management in SCM – Need for Inventory Management, Control of Inventory in Retail and Services, Costs in Inventory Management [2L]
10. Information Systems in SCM – Supply Chain Information Systems, Requirements Analysis of IT for SCM, E-Business and SCM, Challenges in Implementing Supply Chain Information Systems [4L]
11. SCM in the Global Environment – Global Business Environment, Approaches to Globalization, an Overview of Global SCM, Challenges in establishing a Global Supply Chain [4L]
12. Case Study [2L]

Suggested Readings:

1. Chandrasekaran, N. – Supply Chain Management – Process, System and Practice; OUP
2. Altekar, R.V. – Supply Chain Management; PHI
3. Chase, R.B., Shankar, R. and Jacobs, F.R. – Operations and Supply Chain Management; MGH
4. Agarwal, D.K. – Supply Chain Management: Strategy Cases and Best Practices; Cengage Learning
5. Chopra S., Meindl,P. and Kalra, D.V. – Supply Chain Management: Strategy, Planning and Operation; Pearson
6. Shah, J. – Supply Chain Management: Text and Cases; Pearson

OM 302: OPERATIONS STRATEGY

MODULE I:

1. Introduction – Innovation and operations discipline; Frameworks for strategy and the decision category approach; Developing an operations strategy; Content of Operations Strategy; The Operations Strategy Matrix; Value chain dynamics and operations decisions; Enterprise architecture and operations strategy. [4L]

2. **Key Elements and Decision Categories** – Vertical integration and outsourcing; Business processes; Process technology decisions and multiple plants; Capacity strategy: How to make decisions on capacity and capacity expansion; Facilities strategies and globalization; Comparisons of plant productivity; facilities strategy and globalization; Sourcing and supplier management; Information systems and the impacts of the electronic economy. [6L]
3. **Capabilities and Different Approaches** – Competing on quality: Sources of quality and different measures of quality; Competing on cost versus competing on availability; Competing on cost versus competing on features and innovativeness; Competition in the various industries: Improving cost and quality. [6L]
4. **Strategic Operations Planning** – Environmental assessment including assessment of technology and competition, organization position assessment, mission, financial and non-financial goals, operational forecasts. [4L]

MODULE II:

5. **Modern Approach to Operations Strategy** – Integrating Operations strategy with Marketing, Finance and HR Strategies. International Operations Management: Key differences between Asia, Europe and USA, Productivity enhancement practices in Asia, Europe and USA, Role of competitive pricing. [6L]
6. **Globalization, Outsourcing and other Critical Issues** – Models for gaining advantage in a global environment; How to position within a value chain; Globalization, joint ventures, sourcing overseas, and macroeconomic effects of off-shoring; Supplier power and overseas sourcing: Moving up the value chain in outsourcing; basic concept of International trade and competitiveness. [6L]
7. **Strategy Implementation** – Tracking goal fulfillment, Quality and productivity, Technology Plans, Mechanization and Automation. Simulation: Techniques of simulation, simulating operational scenarios, integrating operations with other functional areas, simulating service operations based on known distributions. [6L]
8. Case Study [2L]

Suggested Readings:

1. Slack, N., Leewis, M. and Sharma, M.G. – Operations Strategy; Pearson India.
2. Krajewski, L.J. and Ritzman, L.P. – Operations Management – Strategy and Analysis; Addison-Wesley Publishers.
3. Garvin, D.A. – Operations Strategy: Text and Cases; Pearson.
4. Tan, K. H. and Matthews, R. – Operations strategy in action: A guide to the theory and practice of implementation; Edward Elgar Publishing.
5. Hayes, R., Pisano, G. and Upton, D. – Strategic operations: Competing through capabilities; Free Press.
6. Hayes, R. – Operations, Strategy and Technology: Pursuing the Competitive Edge; Wiley India.

OM 303: QUALITY TOOLKIT FOR MANAGERS

MODULE I:

1. Quality Philosophies – Defining Quality, Introduction to TQM, Benefits of TQM, Obstacles in Implementing TQM [2L]
2. Customer Satisfaction – Defining Customer, Customer Perception of Quality, Feedback, Customer Complaints Analysis, Customer Retention [4L]
3. Quality Leadership – Characteristics and Role of Quality Leaders/Gurus, Strategic Planning and Decision Making, Deming Philosophy [4L]
4. Quality Awards – Quality Audits, Documentation, ISO 9000 [2L]
5. Quality Function Deployment – Introduction, Benefits of QFD, Voice of Customer, House of Quality, QFD Process [4L]
6. Failure Mode and Effects Analysis – Reliability and Reliability Requirements, Failure Rate, Stages of FMEA [2L]

MODULE II:

7. Statistical Process Control – 7 QC Tools, Acceptance Sampling Plan, Control Charts – Mean and Range Charts, p-Chart, np-Chart, c-Chart [6L]
8. Continuous Process Improvement - PDCA / PDSA Cycle, Poka yoke, Kaizen, Theory of Constraints, Kaizen, Benchmarking, Business Process Reengineering, Kaikaku [6L]
9. Cost of Quality – Cost of Achieving Good Quality, Cost of Poor Quality, Optimum Quality Level [2L]
10. Six Sigma Implementation – Introduction to Six Sigma, Process Capability Indices, Six Sigma in Manufacturing, DMAIC and DMADV, Technology Development using Design for Six Sigma, Product Design using Design for Six Sigma, Six Sigma in Service Industries [4L]
11. Lean Manufacturing – Concept of Value and Waste, VA, NVA and NNVA activities, Value Stream Mapping, Concept and Features of Lean Manufacturing [2L]
12. Case Study [2L]

Suggested Readings:

1. Besterfield, D.H., Besterfield-Michna, C., Besterfield-Sacre, M. Besterfield, G.H. Urdhwareshe, H. and Urdhwareshe, R. – Total Quality Management; Pearson.
2. Feigenbaum, A.V. – Total Quality Control; MGH
3. Urdhwareshe, H. – Six Sigma for Business Excellence; Pearson
4. Charantimath, P.M. – Total Quality Management; Pearson
5. Omachonu, V.K. and Ross, J.E. – Principles of Total Quality; CRC Press
6. Wilson, L. – How to Implement Lean Manufacturing, Indian Edition; MGH

OM 304: PRICING & REVENUE MANAGEMENT

MODULE I:

1. Introduction – Historical background and context. Financial impact and Implications of Pricing and Revenue Management. [2L]
2. Revenue Management – Introduction, Revenue Management Process, Measuring Revenue Management Effectiveness, Revenue Management in Action. [6L]
3. Pricing Theory and Optimization – Traditional approaches to pricing, Basic pricing optimization, Price response function, Price response with competition, Price differentiation, Economies of price differentiation, Price differentiation and consumer welfare, Variable pricing. [8L]
4. Markdown Management – Markdown Pricing and Optimization; Estimating Markdown sensitivity; Markdown Management in Action. [6L]

MODULE II:

5. Customized Pricing – Introduction and Customized Pricing in Action, Bid Price Approach. [4L]
6. Forecasting – Demand Forecasting – Need, Types, Objectives and Steps. Overview of Qualitative methods, Quantitative methods – Naive, Moving Average (Simple and Weighted), Exponential Smoothing, Linear Regression, Implication of Forecasting in Revenue Management. [6L]
7. Capacity Allocation – Capacity Planning – Long range, Types, Developing capacity alternatives, Capacity Allocation with dependent demands, Forecasting and capacity planning. [4L]
8. Industry Applications – Industry Implementations and Practices, Case Studies. [4L]

Suggested Readings:

1. Philips R.L. – Pricing and Revenue Optimization, Stanford Business Book
2. The Oxford Handbook of Pricing Management Edited by Ozalp Ozer and Robert Philips, Oxford University Press
3. Talluri, K. and Van Ryzin, G. – The Theory and Practice of Revenue Management, Springer.
4. Bodea, T. and Ferguson, M. – Segmentation, Revenue Management and Pricing Analytics, Routledge.
5. Makridakis, S., Wheelright, S.C. and Hyndman, R.J. – Forecasting Methods and Application, Wiley.
6. John Hogan, Joseph Zale and Thomas T Nagle: The Strategy and Tactics of Pricing, published 2016 Routledge.

SPECIALIZATION: HUMAN RESOURCE MANAGEMENT

HR 301: TEAM DYNAMICS AT WORK

MODULE I:

1. Meaning of a Group and Group Dynamics, Classification of Groups – Formal and Informal groups, Command, Task, Interest and Friendship groups. Why people join groups. The dynamics of group formation. Theories of group formation: Classic theory of George Homans, Theodore Newcomb's Balance theory, Exchange theory. Five stage group development model, Punctuated Equilibrium model of development of temporary groups with deadlines. Managerial Implications. [4L]
2. Group Properties: Roles, Norms, Status, Size, Cohesiveness - factors that increase, Decrease group cohesiveness, relationship between group cohesiveness, Performance norms and productivity. Deviant workplace behaviour, Typology of Deviant workplace behaviour, groups and deviant behaviour. Managerial Implications. [4L]
3. The Schachter Study - Implication of the Schachter study, Sociogram, Sociometry. The dynamics of Informal Groups - Norms and Roles in informal groups, informal Roles and the informal organization. The dynamics of formal Groups - Positive and negative attributes of committees. The dysfunctions of group norms violation and

role ambiguity conflict. Groups' contribution to employee satisfaction and performance. Managerial Implications. [4L]

4. Group decision making: Group versus the Individual, strength and weakness of group decision making, Effectiveness and efficiency. Group Think - conformity problem, symptoms of groupthink. Group Shift - risky shift phenomenon. Dysfunctions perspective, social loafing. Group decision making techniques - Interacting groups, Brainstorming, Nominal Group Technique, Electronic meeting, Dialectic Decision Method (DDM), Delphi Technique. Managerial Implications. [4L]

Case Studies, Presentations, quizzes, experiential exercises, Team exercises, Group Discussions, Role Playing. [4L]

MODULE II:

5. Teams in the modern workplace, why teams have become so popular, difference between group and team, types of teams - problem-solving teams, self-managed work teams, cross-functional teams, virtual teams. Managerial Implications. [4L]
6. Creating effective teams, the Team Effectiveness Model - context, composition, work design, process. Ingredients of effective teams - supportive environment, skills and role clarity, super ordinate goals, team rewards. Potential team problems - changing composition, social loafing. Guidelines for developing effective self-managed teams. Turning individuals into team players, shaping team players - selection, training, rewards. Managerial Implications. [6L]
7. Team building: meaning of team building, need of team building, the process, specific building issues, team leadership, skills useful in team building - process consultation, T- group sensitivity training, communication skills, Negotiation skills, conflict resolution in teams, competitive vs collaborative behavior, developing collaboration facilitating behaviours, feedback. Managerial Implications. [4L]
8. Contemporary issues in managing teams: teams and quality management, teams and workforce diversity. Cultural/global issues. Characteristics of mature teams - individual territories versus team spaces. Managerial Implications. [2L]

Case Studies, Presentations, quizzes, experiential exercises, Team exercises, Group Discussions, Role Playing. [4L]

Suggested Readings:

1. Robbins, S.P. Judge, T.A. and Sanghi, S.: Organizational Behaviour, Pearson
2. Luthans, Fred: Organizational Behaviour, McGraw Hill
3. Newstrom J.W. and Devis K.: Organizational Behaviour, McGraw Hill
4. Aswathappa, K: Organisational Behaviour, Himalaya Publishing House
5. Shukla, Madhukar: Understanding Organizations - Organizational Theory and Practice in India, Prentice Hall
6. Sekharan, Uma: Organisational Behaviour, The Mc Graw -Hill Companies

HR 302: HUMAN RESOURCE METRICS AND ANALYTICS

MODULE I:

1. Introduction: HR metrics - meaning, importance, what metrics should HR measure? Examples of HR metrics. HR Analytics - What is Analytics? Big data and Analytics, Stages in Data Analytics, Types of Analytics, Causal Modeling, What is HR Analytics? Objectives of HR Analytics. Its importance and benefits. [6L]
2. Realigning HR to business priorities, Stages of HR Analytics and the role of technology. Leveraging HR Analytics for organizational success. Mapping Business Analytics and HR Analytics. IMPACT Cycle. Pillars of HR Analytics success. Linking HR metrics to business outcomes. HR measurement tools and techniques: Identifying HR metrics, sources of data, tools and techniques of measurement. Excel, SPSS, SAP and Other software packages. [8L]
3. Human Capital Management (HCM) - Concepts, Phases-Scanning, Planning, Producing, Predicting. The Model for Predictive Management. Value Chain for HCM Model. Predictive Human Capital measurements. Guiding principles of Human Capital Analytics. [4L]

MODULE II:

4. HR Analytics and the HR delivery model. Requisites of effective HR Analytics. HR analytics modules: HR Planning, Hiring, HR Operations, Learning and Development, Performance Management, Compensation and Rewards, Succession Planning, Employee Engagement. [10L]

5. Human Resource Information System (HRIS): Understanding HRIS, Framework of HRIS. Benefits of HRIS. HRIS Trends: Talent Management Analysis, Data Analytics, Social media, cloud mobile enabled, Employee Engagement Analysis. Integrated HRIS. [6L]
6. Data and Information needs for HR Manager - Role of IT in HRM - IT for HR Managers - Concept, Structure, and Mechanisms of HRIS, survey of Software Packages for Human Resource Information System including ERP Software such as SAP, Oracle. EHRM-objectives, advantages and disadvantages. [4L]
7. Case Study [2L]

Suggested Readings:

1. Michael Armstrong, A Handbook Of Human Resource Management Practice, Kogan Page
2. Gueutal and Stone, The Brave New World Of e-HR
3. Monk and Wagner, Concepts In Enterprise Resource Planning, Thomson
4. Steve VanWieren, Quantifiably Better: Delivering Human Resource Analytics from start to finish.
5. Bernard Marr, Data-driven HR: How to use Analytics and Metrics to drive performance.
6. Ramesh Soundararajan, Kuldeep Singh, Winning on HR Analytics: Leveraging data for competitive advantage.

HR 303: CROSS CULTURAL MANAGEMENT

MODULE I:

1. Introduction - Concept of Culture For A Business Context; Organizational Culture and Its Dimensions; Cultural Background of Business Stake-Holders [Managers, Employees, Share -Holders, Suppliers, Customers and Others] - An Analytical Framework [10L]
2. Culture and Global Management - Global Business Scenario and Role of Culture; A Frame Work for Analysis; Elements and Processes of Communication Across Cultures; Communication Strategy for/ of An Indian MNC and Foreign MNC and

High Performance Winning Teams and Cultures; Culture Implications for Team Building [10L]

MODULE II:

3. Cross Culture - Negotiation and Decision Making - Process of Negotiation and Needed Skills and Knowledge Base - Over view with two illustrations from multi cultural contexts [India - Europe/ India - US settings, for instance]; International and Global Business Operations- Strategy Formulation and Implementation; Aligning Strategy, Structure and Culture in an organizational Context. [8L]
4. Global Human Resources Management - Staffing and Training for Global Operations - Expatriate - Developing a Global Management Cadre.. Motivating and Leading; Developing the values and behaviors necessary to build high-performance organization personnel [individuals and teams included] - Retention strategies.[4L]
5. Corporate Culture - The Nature of Organizational Cultures Diagnosing the As-Is Condition; Designing the Strategy for a Culture Change Building; Successful Implementation of Culture Change Phase; Measurement of ongoing Improvement. [6L]
6. Case Study [2L]

Suggested Readings:

1. Cashby Franklin, Revitalize Your Corporate Culture: PHI, Delhi
2. Deresky Helen, International Management: Managing Across Borders And Cultures, PHI, Delhi
3. Esenn Drlarry, Rchildress John, The Secret Of A Winning Culture: PHI,Delhi
4. Deepak Kr. Bhattacharya, Cross Cultural Management, PHI
5. Jessica. L. Whiteman, Richard, L. Griffith, Critical Issues in Cross Cultural Management, Springer
6. Broweays, Understanding Cross Cultural Management; Pearson

HR 304: ORGANIZATIONAL DESIGN

MODULE I:

1. Organization Theory - Classical Theories: Scientific Management, Administrative Principles, Theory of Bureaucracy, Human Relations Approach; Modern Theories: Systems Approach, Information processing Approach, Contingency Approach. Managerial Implications. [4L]
2. The Bureaucratic model, dysfunctions of Specialization, Hierarchy, Rules, Impersonal characteristics. Modern view of Bureaucracies, Modifications of Bureaucratic structuring, types of centralization and decentralization, optimum degree of decentralization, Flat and tall structures, Behavioral implications of Flat versus Tall Structure. Managerial Implications. [4L]
3. Organizational Structure and Design - Understanding organizational structure, Elements of Designs of organization's structure: Work Specialization, Departmentalization, Chain of command, Span of control, Centralization and Decentralization, Formalization Understanding Departmentalization by Function, Product, Location, process, customer. Types of structures: Line, Line and Staff, Functional, Project, Matrix structures. Managerial Implications [6L]
4. Case Studies, Presentations, quizzes, experiential exercises, Team exercises, Group Discussions. [6L]

MODULE II:

5. Mechanistic and Organic Models: Determinants of an Organization's Structure - Strategy, the strategy and structure relationship, Organization Size, Technology and Environment, Three Dimensional Model of the Environment. Organizational Designs and Employee Behaviour. Managerial Implications. [4L]
6. Emerging Organizational Designs: Horizontal design, Network design, Virtual Organization, Boundary less Organization, Learning Organisation, Empowered Organizations, e-Organization: implications for Individual Behaviour, Group behaviour, effects on interpersonal relationships. Restructuring Indian Organisations, Regrouping business activities, strategic business units. Managerial Implications. [6L]

7. Forces reshaping Organizations: Organizational Life Cycles, Impact of Culture on organization Structure, Types and forces of organizational change: Globalization, Changes in Information processing technologies, Automation, Demands on organizational processes. Roles and responsibilities in the changed process. Managerial Implications. [6L]
8. Case Studies, Presentations, quizzes, experiential exercises, Team exercises, Group Discussions. [4L]

Suggested Readings:

1. Robbins, S.P. Judge, T.A. and Sanghi, S.: Organizational Behaviour, Pearson
2. Luthans, Fred: Organizational Behaviour, McGraw Hill
3. Newstrom J.W. and Devis K.: Organizational Behaviour, McGraw Hill
4. Aswathappa, K: Organisational Behaviour, Himalaya Publishing House
5. Shukla, Madhukar: Understanding Organizations – Organizational Theory and Practice in India, Prentice Hall
6. Sekharan, Uma: Organisational Behaviour, The Mc Graw –Hill Companies

SPECIALIZATION: BUSINESS ANALYTICS

BA 301: DATA MINING

MODULE I:

1. Introduction to Data Mining: Data Mining Concept, Goals, Stages of Mining Process, Applications, Techniques, Knowledge representation methods, Challenges. [4L]
2. Data Preprocessing: Data types, Quality, Descriptive data summarization – central tendency and dispersion measure, Data cleaning, Outlier detection, Data integration and transform, Data reduction. [6L]
3. Association Rule Mining: Market-basket analysis basics, Naïve algorithm, Apriori algorithm, Software for Association Rule Mining. [4L]
4. Classification and Prediction: Decision Tree, Bayesian classification, Rule-based classification, Prediction – Linear Regression [4L]

MODULE II:

5. Data Warehouse and OLAP: Data Warehouse and DBMS, Multidimensional data model, OLAP operations. [6L]
6. Clustering: Basic issues in clustering, Partitioning methods: k-means, Hierarchical methods: distance-based agglomerative and divisible clustering, Cluster Analysis Software. [8L]
7. Data Mining Software and Applications: Text mining: extracting attributes (keywords), structural approaches (parsing, soft parsing), Bayesian approach to classifying text, Web mining: classifying web pages, extracting knowledge from the web, Social impacts of data mining, information privacy and data security, IT Act overview. [6L]
8. Case Study [2L]

Suggested Readings:

1. Tan, Steinbach and Kumar, Introduction to Data Mining, Pearson
2. Han and Camber, Data Mining: Concepts and Techniques, Morgan Kaufmann
3. Foreman, Data Smart: Using Data Science to Transform Information into Insight, John Wiley
4. Dunham, Data Mining : Introductory and Advanced Topics, Pearson
5. Vipin Kumar: Introduction to Data Mining, Pearson
6. Ian, H. Witten, Frank: Data Mining: Practical Machine Learning Tools and Techniques, Elsevier.

BA 302: MARKETING ANALYTICS

MODULE I:

1. Introduction to Marketing Analytics: Need for Data Driven Marketing Approach, Marketing Engineering, Model Building in Marketing Engineering, Basic Principles of Marketing Analytics to Business Problems, Slicing and Dicing Marketing data with Pivot Tables, Excel Charts to summarize data [6L]

2. Pricing Analytics: Basic Concept of Pricing, Estimating Demand Curves and Optimize Price, Price Bundling, Non Linear Pricing and Price Skimming [6L]
3. Marketing Forecasting: Simple Regression and Correlation, Multiple Regression to forecast sales, Modeling trend and Seasonality, Ratio to Moving Average Method, Winter's Method [4L]
4. Strategic Marketing Analytics: The STP framework, Value generation through STP framework, Managing the segmentation process, Segmentation in Real world: Cluster Analysis, Hierarchical and Non-Hierarchical - K Means Clustering, Prediction of Customer's segment membership: Discriminant Analysis (DA), two Group DA [4L]

MODULE II:

5. Positioning Strategies: Concept of Product positioning, Conduct a Positioning Study, Perceptual Mapping using Principal Component Analysis (PCA), Multidimensional Scaling (MDS), Incorporating preferences into Perceptual Maps [6L]
6. Customer Lifetime Value (CLV): Concept of CLV, Comparison of CLV with related metrics, Analyzing CLV, Extensions of CLV Analysis, Drivers of CLV, Uses of CLV metrics [8L]
7. Product Designing: Concept of Product Designing, Conjoint Analysis as a decompositional preference model, Steps in Conjoint Analysis, Uses of Conjoint Analysis, Drivers of CLV, Uses of CLV metrics [4L]
8. Case Study [2L]

Suggested Readings:

1. Marketing Analytics - Data-driven Techniques with Microsoft Excel by Wayne L. Winston
2. Marketing and Sales Analytics: Proven Techniques and Powerful Applications from Industry Leaders by Cesar A. Brea
3. Marketing Analytics by Winston
4. Data Analytics using R - Seema Acharya, Mc. Graw Hill Publication
5. Advanced Customer Analytics: Targeting, Valuing, Segmenting and Loyalty Techniques' Mike Grigsby

6. Digital Marketing Analytics: Making sense of Consumer Data in digital world, Chuck Hemann, Ken Burbary; Que Publishing

BA 303: BUSINESS FORECASTING

MODULE I:

1. Historical perspective of Business Forecasting: Concept of Business forecasting, Difference among Econometrics, Mathematics and Statistics, Importance of Econometrics, Linkage of Econometrics with Business Forecasting-Types of Data [6L]
2. Regression Model: Steps, Linear, Non linear. [4L]
3. Univariate time series: Linear model, Stationarity, Autocorrelation, Partial Auto correlation, Multicollinearity, ARIMA, ARMA process. [10L]

MODULE II:

4. Stationarity and Unit Roots Tests: Introduction, Unit Roots tests, Stationarity tests [4L]
5. Univariate Time Series: Volatility Models-Introduction, The ARCH Model, The GARCH Model [6L]
6. Multivariate Time Series Analysis: Vector Autoregression Model-Cointegration [4L]
7. Introduction to E Views: E views Functions, Programming in E views [2L]
8. Introduction to R studios: Programming in R for time series forecasting [2L]
9. Case Study [2L]

Suggested Readings:

1. Damodar N. Gujarati, Basic Econometrics ,McGraw-Hill Publication,2003
2. Chris Chatfield, The Analysis of Time Series: An Introduction , Chapman and Hall
3. N. H. Chan, Time Series: Applications to Finance, John Wiley and Sons,

4. James D. Hamilton, Time Series Analysis, Princeton University Press,
5. Terence C. Mills, The Econometrics of Financial Time Series Cambridge University Press.
6. Box, Jenkins, Reinsel, Ljung, Time Series Analysis: Forecasting and Control; Wiley Publications

BA 304: DATA SCIENCE USING R

MODULE I:

1. Programming in R: Basics of R, Conditional and loops, R packages/libraries, Data mining GUI in R, Data structures in R, Exceptions/ debugging in R [4L]
2. Data Wrangling: Reading CSV, JSON, XML, .XLSX and HTML files using R,ETL operations in R, Sorting/ merging data in R, Cleaning data, Data management using dplyr in R [4L]
3. Modeling in R:Linear regression model in R, Multiple linear regressions model, Representation of regression results, Non Linear Regression [10L]

MODULE II:

4. Mining Algorithms using R: Association analysis, Market-based analysis/ rules, Apriori algorithm, Segmentation analysis- types of segmentation, k-means clustering, Bayesian clustering, Principal Component Analysis (PCA) [10L]
5. Time Series Forecasting in R and model deployment: Basics of time series, Components of time series, Time series forecasting, Deploying predictive models [10L]
6. Case Study [2L]

Suggested Readings:

1. R for Data Science – Hadley Wickham and Garrett Grolemund
2. R in Action – Robert Kabacoff
3. R for Everyone: Advanced Analytics and Graphics – Jared P. Lander
4. The R Book – Michael J. Crawley
5. R and Data Mining: Examples and Case Studies – Yanchang Zhao
6. Data Analytics using R - Seema Acharya, Mc. Graw Hill Publication