

M.COM PART TWO
SEMESTER III
STATISTICAL TECHNIQUES
Core course
Unique subject code – PCC3C01

Time: 3 Hours

Theory – 80 Marks
Internal Assessment – 20Marks

Periods Allotments

Objective: The Objective of the course is to make the Students learn the application of Statistical Tools and Techniques for Decisions Making.

Unit I

12

1. **Statistical Decision Theory:** Decision Environment – Decision making under risk and certainty and utility theory. (Theory)
2. **Correlation Analysis :** Bivariate- Formation of Bivariate Frequency Table (Table Correlation), Partial and Multiple correlation (Practical)

Unit II

16

1. **Statistical Quality Control :** Causes of Variations in Quality, Characteristics – Types of Quality Control, Chart – Production control Acceptance Sampling. (Theory)
2. **Analysis of Variances-** “F” Test (Practical)
3. **Probability :** Basic Concepts, the binomial, Normal and Poisson Distribution and Elementary treatment of the theory – Law of Probability- Sample and Compound probabilities- permutation and Combination (Practical)

Unit III

16

1. **Analysis of Time Series:** Components, Importance, Measurement of Trends, Graphical Methods, Semi-Average Methods and the Method of Moving Average. Theory of Sampling. (Theory)
2. **Interpolation and Extrapolation:** Binomial Expansion Method, Newton Expansion method, Lagrange Method. (Practical)

Unit IV

16

1. **Association of Attributes:** Criteria of Independence, Contingency, Two and Three Attributes, Consistency of Data. (Practical)
2. **Sampling :** Problem relating to Large and Small Samples, Sampling on “T” Test (Practical)

Books Recommended:

1. **Statistics – r. S. N. Pillia and V. Bhagavathi, S. Chand and Company.**
2. **Fundamental of Statistics – Elhancs D. N.**

3. Fundamental of Mathematical Statistics – gupta and Kapoor, Sultan Chand and Sons Publication ISBN –8180540049
4. Fundamental of Statistics – A. K. Agrawal and Sahib Singh, PHI 4th Edition.
5. Statistical Methods – S. P. Gupta, S. Chand and Company, New Delhi
6. Statistics, Theory, method and Application – Sancheti and Kapoor.

**M.COM. PART II
PAPER PATTERN
SEMESTER III
STATISTICAL TECHNIQUES**

Time: 3Hours

Marks: 80

Que. No. 1- Unit I	Theory	16 Marks
	Or	
	Practical	16 Marks
Que. No. 2- Unit II	Practical	16 Marks
	Or	
	Practical	16 Marks
Que. No. 3- Unit III	Practical	16 Marks
	Or	
	Practical	16 Marks
Que. No. 4- Unit IV	Practical	16 Marks
	Or	
	Practical	16 Marks
Que. No. 5		
A	Theory (Unit I)	04 Marks
B	Theory (Unit II)	04 Marks
C	Theory (Unit III)	04 Marks
D	Theory (Unit IV)	04 Marks

**M.Com.Part
II Semester
III
PAPER-II (CBCS)
TAX PROCEDURE AND PRACTICE**

Marks : 80

Objectives

1. To Provide understanding of Direct and Indirect Taxes and their application to different Business situations.
2. To understand Basic concept of Goods and Service Tax.

Unit-I- Income tax Act - 1961

- i** Definitions: - Person, Assesses, Income, Previous year, Assessment year, Agricultural Income, Company, Business, Residential Status, Capital Assets, Short term capital

Assets.

Deduction U/s 80

U/s 80C, 80CCF, 80D, 80DD, 80DDB, 80E, 80U.

Deduction of tax at sources (T.D.S.)

Collection of tax at sources (T.C.S.)

Advance payment of tax, interest and penalties,

- ii** A) Income from Business and Profession (Practical problems)

B) Income from Capital Gain (Practical problems)

Unit-II

- i. Computation of Income of Firm (Practical problems)
- ii. Computation of Income of Company (Practical problems)

Unit-III

- i. Provision for filling of return of Income (including forms of return) sec-139(1),(5)
- ii. Tax Planning: - Meaning of Tax Planning and Management tax evasion and tax avoidance

nature and scope of tax planning and management in the corporate sector.
- iii. **VAT** - Basic concept of VAT, Objectives and Scope of VAT, Merits and Demerits of VAT.

Brief overview of State level VAT in India,

Unit IV – Goods and Service Tax (Theory Only)

- Basic concept of GST, Constitution (101 st Amendment)Act-2016, Need of GST in India , (Theory)

Advantage of GST, Dual GST Model, One Nation-One Tax, What is IGST?, GST Council,

Registration under GST. (Theory)

Books Recommended

1. Ahuja G.K. and Ravi Gupta:- Systematic Approach to Income tax and Central Sales tax, Bharat law House, New Delhi.
2. Singhanian V.K.:- Direct taxes:- Law and Practice, Taxman's publication, Delhi
3. Jain K.C., Gour V.P., Narang D.B.:- Direct taxes Kalyani Publishers, Delhi.
4. Jain Dr. V.K.:- Income tax for beginners - Seth publishers, Mumbai.
5. Goyal Dr. S.P.:- Direct tax planning & Management
6. Datey V.S. :- Indirect taxes Law and practice, Taxman, New Delhi, customs and excise law Time :- various
7. Sonegaonkar Dr. Shripad, Sontakke Dr. Ravindra, Patil Dr. Milind :- Auditing and Income tax - Himalaya publishing. House, Nagpur.
8. Upgade Dr. V. and Shende Dr. A.K.:- Direct taxes -Anuradha publication, Nagpur.

M. Com Part 2
Semester – III (CBCS)
TAX Procedure and Practice
Question Paper Pattern

Max.80 Marks

Question -1	On Unit – I	
	a) Theory	8 Marks
	b) Theory	8 Marks
	OR	
	c) Practical	16 Marks
Question -2	On Unit – II	
	a) Practical	16 Marks
	OR	
	b) Practical	16 Marks
Question -3	On Unit – III	
	a) Theory	8 Marks
	b) Theory	8 Marks
	OR	
	c) Theory	16 Marks
Question -4	On Unit – IV	
	a) Theory	8 Marks
	b) Theory	8 Marks
	OR	
	c) Theory	8 Marks
	d) Theory	8 Marks
Question -5		
	A) Theory on Unit- I	4 Marks
	B) Theory on Unit- II	4 Marks
	C) Theory on Unit- III	4 Marks
	D) Theory on Unit- IV	4 Marks

Elective Foundation/Elective -I

M.Com.-II Semester - III

COMPUTER APPLICATION IN COMMERCE (PCC3E03)

- **Level of knowledge :** Basic Knowledge
- **Objectives:** To develop conceptual understanding of the fundamentals of Entrepreneurial development and procedure requirements. To impart skills in Development.

CONTENTS

Unit- I: Computer Hardware:-

Computer system as information processing system, types of computer system, Block diagram of computer, CPU, input devices, output devices, storage devices, configuration of hardware devices, CPU, RAM, ROM, and secondary storage devices, other peripherals used with PC; Factors influencing PC performance; PC as a virtual office. Virus, types of viruses, antivirus utilities.

Unit-II : Computer Software :-

Operating system, System Software needs, Types of Operating system Batch processing, Realtime processing, Multitasking, Multiprogramming, Multiprocessing, applications of software's, Programming languages; features of DOS; windows operating system, print manager, control panel & setting. Types of file organization, types of files.

Unit III : Networking :-

Network topology, Local Area Networks (LAN) and Wide Area Network (WAN); E-mail; internet technologies, access devices, concept of a worldwide web and internet browser; search engines.

Internet services and Applications, Web Services, E-Learning, Web information system. Web Based Software, Agent-Oriented Computing, E-Business, E-Governance, M-commerce.

Unit IV: Introduction to MS-Office :-

Word Processing - Introduction and working with MS-Word in MS-Office; word basic commands; Formatting - text and documents; Sorting and tables; Working with graphics; introduction to mail-merge.

Spread Sheet- Working with EXCEL- formatting functions., Chart features; Working with graphics in Excel; Using worksheets as database in accounting, marketing, finance and personnel areas.

Power-Point= Basics, creating presentations the easy way; working with graphics in PowerPoint; Show time, Sound effects and animation effects.

BOOKS RECOMMENDED

- 1) I.T. today (encyclopedia) by S. Jaiswal (Textbook)
- 2) Computer today by Donald Sanders
- 3) Computer fundamentals by P.K. Sinha
- 4) Office automation by K.K. Bajaj (Macmillan)
- 5) Business on the net an introduction to the what and how of e-commerce by K.N. Agrawal and others (Macmillan)
- 6) Information technology by S. B. Kishor (Dsganu Prakashan)
- 7) Computer Applications in Management - Usha Dahiya, Sapna Nagpal (Taxmann's pub)
- 8) Information Technology - Dr. Sushila Madan (Taxmann's)
- 9) Bhushan Diwan - E-commerce - S. Chand & Co.
- 10) Fundamentals of Computers - IT Education Solutions Ltd. (Pearson)

Service Sector Management (PCC3E04)

Theory: 80 Marks

Internal Assessment: 20 Marks

Unit–I Introduction of ServiceSector

Definition of Service, Characteristics of services, Growth of Service Sector, Career Opportunities of Service Sector

Unit II Services Sector in the Indian Economy

Reason for Growth of Services in India, service Tax, Emerging key Service Businesses in India: Insurance, Transport, Postal Service, Telecommunication, Software, Electricity, Tourism, Health Care, Education.

Unit III Service Demand Management

Variation in Demand for Services, Formulation of Strategies for demand management, Flexing Capacity to meet demand

Unit IV Consumer Protection in Services

Consumer Rights, Consumer Movement in India, The consumer Protection Act 1986, Protection to Consumers of Services.

Reference Books :-

- 1) Service Marketing- K. Rama Mohan Rao, Pearson Education
- 2) Service Marketing, S. M. Jha Himalaya Publishing House.

ECONOMICS OF LABOUR (PCI3E04)

Unit-

I: Nature and Scope: Nature and Scope of Labour Economics Peculiarities of Labour. Labour as a Factor of Production Labour Force. Labour Supply. Labour Demand. Labour Supply Overtime.

Unit-

II: Labour Market: Concept of Labour Market, Commodity Market and Labour Market. Imperfection in Labour Market, Labour Market Equilibrium, Labour Discrimination.

Unit-III: Labour and Change: Labour and Technological Change, Impact of Rationalisation, Automation, Modernization and Computerisation. Labour Mobility, Human Capital Education and Earning, On the Job Training and the Wages.

Unit-IV: Labour in India.

Labour and Trade Union Labour Market, Contract and Work Incentives, Unemployment.

Unit-V: Labour in India- Labour in Indian context,

Organised labour, Unorganised Labour, Labour from Agriculture, Industry and Service Sector.

REFERENCE BOOKS:

Dr.R.Singh&I.C.Singhal	Labour Problems.
A.N.Agrawal	Labour Problems.
R.A.Lester	Economics of Labours.
T.N.Rastogi	Indian Industrial Labour.
Bhagoliwal	Industrial Relations & Economics of Labour.
R.C.Saxena	Labour Problems.

RESEARCH METHODOLOGY

(PCI3E05)

Unit-I: Introduction to Research Methodology, Meaning and purpose of Research, Importance of Research, Types of Research, Research Problem, Selection & Formulation, Hypothesis.

Unit-II: Data Collection - Review of literature, Methods and techniques of Data collection, Sampling and sampling Designs, Attitude Measurement and scales.

Unit-III: Presentation and Analysis of Data, Data Processing, Statistical Analysis and Interpretation of data, Model Building and Decision Making.

Unit-IV: Presentation of Report, formats of reports, report writing, substance of report.

Unit-V: Research Paper - Concept, Importance, Preparation and Presentation of Research paper.

REFERENCE BOOKS:

M.R.Cohen & E.Nagar An Introduction to Logic & Scientific Methods.
A.K.Das Gupta Methodology of Economic Research.
Yong Pauline Scientific Social Surveys and Research.
W.J.Good Methods in Social Research.
Wilkinson & Bhandarkar Methodology & Techniques of Social Research.

Group C : Marketing Management

SP01: PCB3EC1: Retail & Services Marketing

Unit 1

Retail marketing and retail management, strategic retail marketing, retail marketing mix, CRM and retail marketing, CBB & retail marketing

Unit 2

Retail location & related strategies, retail store operations, retail organizations & structure, applications of IT in retail, retail distribution and SCM

Unit 3

Retail pricing and promotional pricing, retail branding strategies, store & non-store brands, merchandising and warehousing, global retailing, modern trade and new trends in retailing

Unit 4

Services, nature, characteristics, service product & pricing, service positioning, pricing services

Unit 5

CRM and services, managing service quality, CBB and services marketing, service demand management, promoting & services

Unit 6

MIS & research for services, demand analysis for services, managing service processes, service distribution, employees (people) and services marketing

References:

1. Retail Marketing Management – David Gilbert
2. Retail Marketing – A Sivakumar
3. Retail Marketing – P Mcgoldrick
4. Retail Management – Barry Berman/ Joel R Evans/ Mini Mathur
5. Services Marketing – K Rama Mohan Rao
6. Services Marketing - Alan Wilson, Valarie Zeithaml, Mary Jo Bitner, Dwayne Gremler
7. Services Marketing – Christopher Lovelock/ Jochen Wirtz/ Jayanta Chatterji
8. Services Marketing – Harsh Verma

SP02: PCB3EC2

Product Management & Brand Management

Unit 1

Product Life Cycle and its variants, levels of a product, product mix, product portfolio decisions, BCG matrix and its applications.

Unit 2

Product planning, new product development process, Innovation and Creativity, product testing, product placement & commercialisation, conducting financial cost benefit analysis and its tools.

Unit 3

Introduction to brands, branding and brand management, brand research and brand equity, branding for different product categories, branding & differentiation, brand image, brand element and brand association.

Unit 4

Brand equity measurement, competitive analysis, brand positioning, brand hierarchies and brand portfolio analysis.

Unit 5

CBBE (Customer based brand equity), Branding & IMC, branding and marketing mix, branding and product mix, brand attributes, branding and segmentation.

Unit 6

Developing brand strategies, brand image and awareness, brand equity systems, brand value, brand extensions, brand roadmap, sustaining and managing brand equity and global branding.

References:

1. Product Strategy & Management – M Baker & S Hart
2. Strategic Brand Management – K Keller, MG Parameswaran, Isaac Jacob
3. Expert Product Management – Brian Lawley
4. 42 Rules of Product Management – Greg Cohen
5. The Product Manager's Handbook – Linda Gorchels
6. Building Strong Brands – David Aaker
7. Managing Strong Brands – David Aaker
8. Branding Unbound – Mathieson
9. United we Brand – Moser

GROUP D: FINANCIAL MANAGEMENT

SP01: PCB3ED1

ADVANCED FINANCIAL MANAGEMENT

Unit I: Capital structure & Value of firm - Assumptions & definitions, NI approach, NOI approach, Traditional Position, MM position, Taxation & capital structure, Trade off theory, Signaling theory. EBIT-EPS Analysis

Unit II: Cash & Receivables Management - Motives of holding cash, factors determining the cash balance, Managing the cash flow, Options for investing surplus funds & strategies for managing surplus funds, Cash Management Models- The Baumol model, The Beranek Model, The Miller-Orr Model.

Credit policies, Evaluating the debtors, Credit analysis & decision, Credit terms & collection policies, Control of accounts receivables, Heuristic approach

Unit III: Leasing, Hire-purchase & Project Finance - Types of leases, rationale for leasing, Mechanics of leasing, Operating lease, Leasing as financial decision, Lease Vs borrow & buy evaluation, Hire-purchase arrangement, Choice between leasing & hire purchase, Project finance

– Private Equity, Venture Capital.

Unit IV: Risk Analysis in Capital Budgeting - Sources & perspective of risk, Sensitivity analysis, Scenario analysis, Breakeven analysis, Miller Model, Simulation analysis, Decision tree analysis, Corporate risk analysis, Managing risk, Project selection under risk, Risk analysis in practice.

Unit V: Valuation of business and Mergers & Acquisitions - Valuation of business- Adjusted book value method, value of shares and debt method, comparison method, DCF method. M&A

– Exchange ratio Financial evaluation of mergers, M&A as capital budgeting decision, Economic value added & market value added Taxation aspects.

Unit VI: Contemporary issues in Financial Management –Public offerings - IPO,FPO,ASBA, book building, Reverse book building, private placement, Green shoe option, Red Herring Prospectus. ESOP, ESPP, Refinancing, Securitization, Private equity, venture Capital,

Carbon Credit, Sarbanes _Oxley Act, Balanced score card, Sub-prime crisis, P notes, GDR, ADR, ECB, Indian Depository Receipts, Hundi, Parta system,

Suggested Readings:

1. Financial Management- Ravi Kishore, Taxmann's, New Delhi.
2. Financial Management: Problems and Solutions, Ravi Kishore, Taxmann, New Delhi
3. Financial Management – Theory & Practice by Prasanna Chandra, TMH Publishers 2004
4. Financial Management-I.M. Pandey, Vikas publishing house, New Delhi.
5. Financial Management & Policy – V. K. Bhalla – (Anmol Publication, New Delhi)
6. Strategic Financial Management – Dr. J.B. Gupta – Taxmann's, New Delhi
7. Financial Management – Rajiv shrivastava , Anil Misra – Oxford Higher Education.
8. Financial Management – M. Y. Khan & P. K. Jain – Tata McGraw Hill E

SP02: PCB3ED2

RISK MANAGEMENT AND DERIVATIVES

Unit-I: Risk, Return and Market Indices- Types of Risk; Significance of Beta, Beta versus Standard Deviation; Risk – Return Trade-Off, Understanding Interest rates, Understanding the Stock Index, Economic Significance of Index Movements, Index Construction Issues, Desirable Attributes of an Index – impact cost, Applications of Index. Construction and composition - Sensex and Nifty, Calculation of indices. Free float Market capitalization.

Unit-II: Introduction to Derivatives Trading and Settlement : Types of Derivative Contracts, History of Financial Derivatives Markets, Participants in a Derivative Market, Economic Function of The Derivative Market; Trading of Derivatives Contracts Futures and Options Trading System, The Trader Workstation, Futures and Options Market Instruments, Criteria for Stocks and Index Eligibility for Trading, Charges ; Clearing and Settlement - Clearing Entities, Clearing Mechanism, Settlement Procedure, Risk Management, Margining System

Unit-III: Option Derivatives and Trading Strategies using options –Types of Options - Call Options, Put Options; Option Pay-Offs; Terminologies used in the Options Market; Option Pricing – Binomial Model and Black & Scholes Model; Trading Strategies using options- caps, collars, butterfly, straddle, strangle etc. Option Greeks.

Unit-IV: Futures Derivatives and Trading Strategies using futures –Types of Futures– On the basis of Maturity, On the basis of the underlying asset; Margining in the Futures market; Terminologies used in the Futures Market; Futures Pricing – Cost of Carry Model; Trading Strategies using futures.

Unit-V: Foreign Exchange risk & Corporate Exposure Management –Types of Exposure– Transaction, Economic and Translation; Foreign Exchange Risk – Types, Risk Management Techniques – External and Internal. International portfolio diversification and transfer pricing, Risk Management practices in India.

Unit-VI: Swaps and Credit Derivatives –Concept and Characteristics; Types of Swaps– Interest Rate Swaps and Currency Swaps; Structure of Interest Rate Swaps and Intermediated Interest Rate Swaps; Relation between Interest Rate Swaps and Forward Rate Agreements; Calculations on Swaps. Concept of Credit Derivatives; Evolution and the Global Scenario; Types – Credit Default Swaps, Total Return Swaps, Credit Options, Credit Linked Notes. RBI guidelines.

NB: Numerical shall be based on Unit I, Unit III, Unit IV, Unit V and Unit VI only.

Suggested Readings:

1. Strategic Financial Management – Dr. J.B. Gupta – Taxmann's, New Delhi
2. Financial Management – Rajiv Shrivastava , Anil Misra – Oxford Higher Education
3. Financial Management- Ravi Kishore, Taxmann's, New Delhi.
4. Financial Management: Problems and Solutions, Ravi Kishore, Taxmann, New Delhi
5. Financial Management – Theory & Practice by Prasanna Chandra, TMH Publishers 2004
6. Financial Management-I.M. Pandey, Vikas publishing house, New Delhi.
7. Options Futures and other Derivatives – John C.Hull, PHI-EEE, 2011
8. Reference Material of NCFM from www.nseindia.com

Group E-Human Resource Management

SP01: PCB3EE1 :

Performance Management & Compensation

Unit I: Job Evaluation / Grade Structure - a. Purpose and Methods of Job Evaluation, Ranking Systems, Job Classification / Grading method, Points System, Factor Comparison Method, Packaged Point Plans, Implementation; b. Job Analysis; Nature/Use, Methods, Job Identification Summary, Relationships, Responsibilities and Duties, Writing Job Specifications and Descriptions – Judgmental and Statistical Methods.

Unit II: Compensation Planning - Concepts, Nature and objectives of Compensation, Wages, Wage Fixation, Wage differentials, legal Status of Wages (basics), **Wages–Variable Compensation and Supplementary Compensation** – Perks, Fringe Benefits, Pay for Performance – Incentives.

Unit III: Competency Mapping / Workflow Mapping - Concept, Practical Application, Implementation

HR Scorecard / Balanced Scorecard - Introduction, Concept, Structure, Practical Application

Unit IV: Performance Management System - Introduction, Objectives, Tools, Methods of PA, Graphic Rating Scales, BARS, Alternation Ranking, Forced Distribution Method, Critical Incident Method, MBO, Assessment Centers, Group Appraisal; 360 deg Feedback, Appraisal Interview;

Performance Planning and Potential Appraisal – Trait Based, Behavior Based and Result Based, Pitfalls.

Unit V: Career Management - Career Development Plan -Employee's and Employer's Role,

Career Anchors, Nature of Careers, Career Problems – Low ceiling Careers, Career Mapping, Career Counseling, Succession Planning.

Unit VI: Ancillary Topics - Goal Setting, Promotions and Transfers; Separations- Retirement, VRS, Deputation, Death, Retrenchment, Pink Slips.

Suggested Readings

1. Human Resource Management, by Snell / Bohlander Publication – Thomson
2. Compensation by Milkovich & Neman, 8 th edition. Publication – McGraw –Hill
3. Human Resource Management, by Gary Dessler Publication – Thomson
4. Accounting Practices in HRM by M. Kolay
5. Managing Human Resources by Monappa Publication – Macmillan

SP02 : PCB3EE2:

Training & Development Practices

Unit I: Training and Development - What is training? Nature of training, Significance of training, Importance of training, Scope & Objectives of training, Benefits of training, Philosophy of training.

Unit II: Training Need Analysis and Design - Identification of training needs, Environment for training, Areas of training, Responsibilities for providing training, Training Calendar, Facilities for training. **Training Design** - Perspectives for Designing Training, Designing a training programme, Objectives, components and methods of training designs, Training Process, Training of trainers (TOT).

Unit III: Training & Development Methods and Techniques - Approaches to Training, On the Job Training & Off the Job Training, Training Methodology – Case Study, Management Games, Brain Storming, Role Play, In- Basket exercises, Group Discussion; Teaching aids and techniques, Audio-visual aids, Cross cultural training. Concept & Importance of MDP's, Steps in MDP's, Methods and Techniques of MDP's.

Unit IV- Evaluation of Training - Feedback from participants, Measurement of training effectiveness, Types of evaluation techniques, Evaluation of trainers and facilities for training.

Unit V-Introduction to HRD - Field of HRD: A multi dimensional and new concept, Goals and challenges, Objectives and determinants, Approaches to HRD. **Issues in HRD** - Strategy for HRD: Diversify in work force, exit strategy, competitive advantage and relationship management; Human Resource Planning for diversification, expansion, mergers, acquisitions and takeovers.

Unit VI- HRD In Different Sectors: - HRD Organizations, Government Agencies and their role in HRD, Rural development through HRD, Emerging Sectors: I.T. and I.T.E.S.

Suggested Readings

1. Personnel Management and Human Resources – N.C. Jain & Saakshi (Allied Publisher)
2. Effective Human Resource Training and Development Strategy – Dr. B. Rathan Reddy
Publication – Himalaya Publication House
3. Human Resource and Personnel Management – Text and cases, K. Aswathappa,
Publication - McGraw- Hill Publishing co. ltd
4. Human Resource Management , Tenth Edition, Gary Dessler, Publication- Pearson
Education
5. Human Resource Management , Ninth Edition, R.Wayne Mondy, Robert M, Noe,
Publication- Pearson Education
6. Human Resource and Personnel Management, by K Aswathappa, Publisher: Mc-Graw

Hill.

7. Strategic Human Resource Management, by TanujaAgrawal, Publisher: Oxford University Press.
8. Personnel and Human Resource Management: Text and Cases, By P. SubbaRao, Publisher: Himalaya Publishing House.
9. [Knowledge Management and the Role of HR](#) by Chris Harman, Publisher: FTPrenticeHall
10. [HR Interventions in the Global Competitive Regime: Strategies for Leadership](#) by Charles Xavier, C.S. Adhikary and RamanaMurty, Publisher: ExcelBooks

Elective -II

Group F - Information Technology Management

SP01: PCB3EF1:

Database Management Systems

Unit I: Introduction to Database Management System - DBMS (DatabaseManagementSystem), FMS(File Management System), FMS Versus DBMS, Over view of DBMS, DBMS Model, DBMS Architecture. Design Consideration, Decomposition, Functional Dependency, Normalization, 1NF(First Normal Form), 2NF(Second Normal Form),3NF(Third Normal Form),BCNF(Boyce-Codd Normal Form) (First Normal Form),4NF(Fourth Normal Form),5NF(Fifth Normal Form), De-normalization.

Unit II: Entity / Relationship (ER) Modeling - Aspects of ER modeling, Types of Relationship, Practical Applications, Developing of ER Diagrams of various systems (e.g. Organizations, Educational Institutions and any live entity examples). Relational Model - Relational Database Primer, Relational Database Characteristics, Relational Algebra, Relational Calculus, Database Integrity, Keys, Entity & Referential Integrity, Views, Joins.

Unit III: Brief Introduction to SQL - History & standardization of SQL, Benefits of SQL, Elements of SQL languages, Database Objects, Reserve words, Variables, data types, DDL commands(CREATE, DROP, MODIFY, ALTER), DML COMMANDS (INSERT, UPDATE,DELETE, SELECT), DCL commands, Embedded SQL, Dynamic SQL.

Unit IV: Data Mining & Data Warehousing - Data Mining- Concept, Terminology, Functions, Applications, Types (Text, Concept, Graph, Sequence, Tree), Techniques, Software. Data Warehousing - Concept, History, Storage Methods, Success Parameters, Software Evaluation, Architecture, Developing Strategy, Use in Strategic Decision Making, Maintenance Issues, Web Data Analysis.

Unit V: Object Technology - Introduction to Object Technology, Abstraction, Encapsulation, Inheritance, Object Technology & RDBMS, Object Oriented Database Management System (OODBMS).

Unit VI: Advanced Topics in DBMS - Deductive Databases: features, Overview of Logic, knowledge representation, Internet & DBMS, Multimedia Database, Digital Libraries and Mobile Databases. Database Security - Threats & Risk, Cryptography, Digital Signature, Database Control, User & Database Privileges.

Suggested Readings:

1. Database Processing; Fundamentals, Design, and Implementation: David Kroenke, McMillan
2. Systems and Developers Manual for a RDBMS such as ORACLE
3. Guide to SQL: Philips Pratt, Boston Boyd and Fraser, 1990
4. Object Oriented Analysis: Peter Coad and Yourdon Edward, 2nd Ed, Eaglewood Cliff, New Jersey Yourdon Press
5. Database Management: Fred McFadden and Jeffery Hooper, 3rd Ed., Redwood City, Benjamin – Cummins, 1991
6. Data Mining Techniques: For Marketing, Sales, and Customer Relationship Management by Michael J. A. Berry

SP02: PCB3EF2:

E-BUSINESS

UNIT- I: Introduction-Definition of E-commerce, Unique Features of E-commerce Technology: Ubiquity, Global Reach, Universal Standards, Richness, Interactivity, Information Density, Personalization/ Customization, Social Technology: User Content Generation and Social Networking, Web 2.0, Play My version; Growth of the Internet and the Web, Origins and Growth of E-commerce, Insight on Technology: Spider Webs, Bow Ties, Scale-Free Networks and Deep Web Technology and E-commerce in Perspective

Unit – II: E-Business Technologies-The Internet: Key Technology Concepts: Packet Switching, Transmission Control Protocol/Internet Protocol (TCP/IP), IP Addresses, Domain Names, DNS, and URLs, Client/Server Computing The Internet Today: The Internet Backbone, Internet Exchange Points, Campus Area Networks (CANs), Internet Service Providers, Intranets and Extranets, Who Govern the Internet? Building an E-commerce Website: Planning: The Systems Development Life Cycle, Systems Analysis/Planning: Identify Business Objectives, System Functionality and Information Requirements. , System Design: Hardware and Software Platforms, Building Your-Own versus Outsourcing, Host your Own versus Outsourcing

UNIT – III: E-Business Models- Eight Key Elements of a Business Model: Value Proposition, Revenue Model, Market Opportunity, Competitive Environment, Competitive Advantage, Market Strategy, Major Business to-Consumer (B2C) Business Models: Portal, E-tailer, Insight on Technology: Search, ads and Apps: The future for Google, (and Microsoft), Content Provider, Transaction Broker, Market Creator, Service Provider, Community Provider, Major Business-to-business (B2B) Business Model: E-distributor, E-Procurement, Exchanges, Insight on Business: Onvia Evolves, Industry Consortia, Private Industrial Networks, Business Models in Emerging E-commerce Areas: Consumer-to-consumer (C2C) Business Models, Peer-to-peer (P2P) Business Models, M-commerce Business Models , E-Commerce Enablers: The Gold Rush Models, Insight on Society: Is Privacy Possible in a Wireless World?, How the Internet and the Web Change Business: Strategy, Structure, and Process, Industry structure , Industry Value Chains, Firm Value Chains, Firm Value Webs, Business Strategy.

UNIT- IV: Back Office Automatics For E-Business - Basics of Enterprise Resource Planning, ERP Decision, Enterprise Architecture Planning, ERP Implementation, ERP Architecture and Toolkit Evolution, Implementation Supply Chain Management And E-Fulfillment: The Basics of Supply Chain Management, Internet-Enabled SCM, E-Supply Chain

Fusion, Management Issues in e-supply Chain Fusion, The continuing Evolution of e-Supply Chains, A Roadmap for Managers, Demystifying E-Procurement: Buy-Side, Sell-Side, Net Markets And Trading Exchanges: Evolution of e-Procurement Models, Evolution of Procurement Processes, e-Procurement Infrastructure Integrating Ordering, Fulfillment, and payment, E-Procurement, Analysis and Administration Applications, Marketplace Enables, A Roadmap for e-Procurement Managers.

UNIT-V: Moving To E-Business - Spotting E-Business Trends, Trends Driving E-Business, Customer-Oriented Trends, E- Service Trends, Organizational Trends, Employee Megatrends, Enterprise Technology, Trends, General Technology Trends, What These 20 Trends Have In Common, Digitizing The Business: E-Business Patterns, E-Business Patterns: The Structural Foundation, The E-Channel Pattern, The Click-And-Brick Pattern, The E-Portal Pattern, The E-Market Maker Pattern, The Pure-E —Digital Products Pattern, Thinking E-Business Design: More Than Technology, The Race To Create Novel E-Business Designs, Step: 1: Self – Diagnosis, Step: 2: Reverse The Value Chain, Step: 3: Choose A Focus, Step 4: Execute Flawlessly, Lessons From E-Business Design.

UNIT – VI: Ethical, Social And Political Issues -Understanding Ethical, Social, and Political Issues in E-commerce, A Model for organizing the issues, Basic Ethical Concepts: Responsibility, Accountability, and Liability, Analyzing Ethical Dilemmas, Candidate Ethical Principles, Privacy and Information Rights, Information Collected at Ecommerce Sites, Profiling and Behavioral Targeting, The Internet and Government Invasions of Privacy:, E-commerce Surveillance, Legal Protections, Informed Consent, Intellectual Property Rights, Types of Intellectual Property Protection, Copyright: The Problem of Perfect Copies and Encryption, Patents: Business Methods and Processes, Trademarks: Online Infringement and Dilution, Challenge: Balancing the Protection of Property with other values.

Suggested Readings:

1. Michael Allen's E-Learning Library: Creating Successful E-Learning: A Rapid System For Getting It Right First Time, Every Time (Michael Allen's E-Library) by Michael W. Allen
2. Harvard Business Review on Corporate Governance (Harvard Business Review Paperback Series) by Walter J. Salmon, Jay William Lorsch, Gordon Aldson, and John Pound
3. E-Commerce: Business, Technology, Society (3rd Edition) by Kenneth Laudon and Carol Traver
4. Knowledge Management by Carl Frappaolo

GROUP G

HEALTHCARE MANAGEMENT

SP01: PCB3EG1 : Healthcare and Social Policy

Unit I: Social Welfare, Social policy, **Factors in Social Policy:** Situational, Structural, Ideological and Environmental, **Health Policy formulation:** Factors, Determinants and other sectoral issues.

Unit II: Health care and Social development.

Unit III: National health policy: Review of different committees. **Health policy:** Input, Output and Performance; Role of Private and Voluntary groups; Role of national and International agencies. **Health and Social Policy:** International Perspective; Health policy the Disadvantaged.

Unit IV: Concept of Health Care Planning, Health Expenditures, Hospitals as a Health Care Delivery System. Management of Health Care Systems. Dimensions of Health Care Management.

Unit V: Concepts of Environmental Health Care; Microbiological considerations; Laundries, CSSD, Insect, Rodent Control, Emergency and Disaster Planning; Safety Management; Patients and Personnel Safety, Fire Safety, General Sanitation.

Unit VI: Hazardous Waste Management; Solid Waste Handling & Disposal; Liquid Waste Handling, Collection & Disposal; Water Treatment and Distribution, Planning and Organising for Safety and Waste management. Legal and Social Aspects of Waste Management; Trends and Practices.

Suggested Readings

1. Chatterice, Meera, "Implementing Health Policy". 1988, Manohar, New Delhi,
2. Djunkanovic, V and Mach, E P. ed "Alternative Approaches to Meeting Basic Health Needs in Developing Countries", 1975. WHO, Geneva.
3. Lee, Kenneth and Mills, Anne. "Policy making and Planning in Health Sector". 1987, Oxford University Press, Oxford.

4. Leichter, HM. "A comparative approach to Policy Analysis: Health Care Policies in Four Nations", 1979. Cambridge University Press, Cambridge.
5. Roemer, M I. "Comparative National Policies on Health Care" . 1977. Mareel Dekker, New York.
6. Ferry, Ted Safety & Health Management Planning, Van Nostrand Reinhold, New York. 1990.
7. Journal of Hazardous Waste Management. U.S.A.
8. Zweife, Peter I and Friedrich Breyer Health Economics, Oxford University Press, New York, 1997.
9. Kurt. Darr& Jonathan S R, Hospital Organization and Management Text and Brading, CBS Publishers & Distributors, 1992

SP02 : PCB3EG2:

Community Health, Epidemiology & Population Management

Unit I: Meaning and scope of epidemiology.

Unit II: Health statistics and health indicator, Morbidity, Mortality. Data sources, collection, analysis and uses, Health Information System, Use of Computers.

Unit III: Primary health care and community participation. Models and factors associated with health and diseases.

Unit IV: Organizational aspects of community health. Clinical care.

Unit V: Physical aspects of community health, Psychological aspects of community health. Special aspects of community health, Drugs, Alcoholism etc. Preventive and promotive health care.

Unit VI: Population policy, Planning and management.

Suggested Readings

1. Alderson, M. "An Introduction to Epidemiology". 2nd, ed. 1983. MacMillan, London.
2. Hill, A B. "A short textbooks of Medical Statistics". 1~84. UNI Books
3. Jolly, K G. "Family Planning in India 1969-84: A District Level Study", 1986. Hindustan, Delhi.
4. Abelln, T Brzenski, Z J and Carstals, V D. "Measurement in Health Promotion and Protection", 1987, WHO, Copenhagen.
5. Pollard, A H. etc "Demographic Techniques", 1981. Pergamon, Oxford.

Group H

International Business Management

SP01 : PCB3EH1 :

External Sector In India – Policy, Procedures & Practices

Unit I: Composition, Growth And Direction Of Exports & Imports From India (Countries & Commodities/ Products) Major Export & Import Products & Services, Iec Codes Importance And Procedures, Export Incentives, Thrust Areas For Export Promotion.

Unit II: Role Of Government/ Institutions In Export Promotion–Commerce Ministry, Dgft, Chambers Of Commerce, Export Promotion Councils, State Trading Corporations, Commodity Boards, Eou Etc.

Unit III: Export Quality & Packaging Standards , Customs And Excise Regulations Applicable To Exports & Imports, Role Of Clearing & Forwarding Agents.

Unit IV: Exim Documentation, Preparation Of Contracts, Processing Export Order, Introduction To Letters Of Credit, Incoterms & Ucp 600, Ispm-15 (Fumigation)

Unit V: Logistics Management , Shipping Cargo, Vessels And Charters, Multi Modal Transport, Shipping Documents.

Unit VI: Marine / Air Insurance, Export Risk Coverage (Ecgc) Settlement Of International Trade Disputes, Arbitration,

Suggested Readings

International Business Environment– V.K. Bhalla, Anmol

Publications Export Management – Khurana, Galgotia Publications

Export Import Procedures & Documentation – K.S. Jain, Himalaya Publishing

SP02 : PCB3EH2:

Foreign Exchange Management & Export Finance

Unit I: Foreign Exchange Framework–Exchange Rate Systems, Foreign Exchange Markets (Nature, Functions & Participants) , Determination Of Exchange Rates.

Unit II: Foreign Exchange Arithmetic–Types Of Exchange Rates, (Spot / Forward Etc.) Direct Quotation, Calculation Of Rate Of Exchange, Cross Rates & Chain Rule.

Unit III: Overview Of Fema–General Provisions Applicable For Export / Import Transactions

Unit IV: Finance Of Foreign Trade–Need, Importance Of Export Finance, Funded And Non-Funded Facilities, Pre-shipment, Post Shipment Credit Principles And Procedures, Pre-shipment Credit In Foreign Currency (Pfc), Factoring And Forfaiting, Role Of Financing Bank In Export Finance, Concept Of Central Bank & Its Control On International Trade In Country.

Unit V: Risk Management In Foreign Exchange–Foreign Exchange Risk Nature And Implications, Transaction , Translation And Economic Exposure, Hedging, Forward, Future, Swaps And Options

Unit VI: Foreign Exchange Inflows (Major Sources) - Nri Accounts Types, Efc Accounts, Fdi And Fii , Ecb, Adrs And Gdrs, Nostro & Vostro Accounts.

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Suggested Readings

Foreign Exchange – Jeevanandam C. Sultan Chand & Sons

International Financial Management – V.K. Bhalla, Anmol Publications

Foreign Trade & Foreign Exchange – Chaudhari&Agrawal, Himalaya Publishing House

Group I

Operation Management

SP01 : PCB3E11 : Supply Chain Management

Unit I: Understanding the Supply Chain, Supply Chain Performance and Drivers

What is Supply Chain, Objectives of a Supply Chain, Importance of Supply Chain Decision, Decision Phases in a Supply Chain, Competitive and Supply Chain Strategies, Achieving Strategic Fit, Drivers of Supply Chain Performance, Framework for Structuring Drivers.

Unit II: Designing the Supply Chain Network Designing Distribution Networks and Applications to e-Business: Role of distribution in a supply chain, Factors influencing distribution network design, design options for a distribution network, e-Business and the distribution network, **Network Design in the Supply Chain:** the role of network design in the supply chain, factors influencing network design decisions, framework for network design decisions, models for facility location and capacity allocation, **Network Design in an Uncertain Environment:** Impact of uncertainty on network design.

Unit III: Planning Demand and Supply in a Supply Chain Demand Forecasting in a Supply Chain: The role of forecasting in a supply chain, Characteristics of forecast, Components of forecast and forecasting methods, Basic approach to demand forecasting, managing, **Predictable Variability:** Responding to predictable variability in a supply chain, Managing supply and demand, Managing predictability and implementing solutions to predictable variability in practice.

Unit IV: Planning and Managing Inventories in a Supply Chain Managing Economies of Scale in a Supply Chain: Role of Cycle Inventory, Economies of Scale to exploit fixed cost and quantity discount, Short term discounting, Managing Multi-echelon Cycle Inventory, **Managing Uncertainty in a Supply Chain:** Role of Safety Inventory in a supply chain, Determining Appropriate Level of Safety Inventory, Managing Safety Inventory in a multi-echelon supply chain.

Unit V: Designing and Planning Transportation Networks Transportation in a Supply Chain: Role, Modes of transportation, transportation Infrastructure, Design options for transportation network, trade-offs in transportation design, Risk management in transportation.

Unit VI: Managing Information Flow in Supply Chains The Role of IT in a Supply Chain, The Supply Chain IT framework, Customer Relationship Management, Supplier Relationship Management, Internal Supply Chain Management, Supply Chain Technologies: Bar Code, RFID, EDI, e-business suites etc.

Suggested Readings

1. Supply Chain Management, Chopra, Meindl and Kalra, Pearson Education, 3rd edition and after
2. Designing and Managing the Supply Chain, David, Kaminsky, Edith, TMH Edition, 2nd Edition and after
3. Supply Chain Management Text & Cases, Vinod V Sople, Pearson Education
4. Supply Chain Management,JanatShah,Pearson Education
5. Supply Chain Management ,Ballau and Srivastava,Pearson Education

SP02: PCB3EI2: Total Quality Management

Unit I: Understanding Quality and Quality Philosophies - Definition of Quality, Dimension of Quality, Quality Planning, Quality costs, Quality Philosophy of Deming, Joseph Juran, Philip Crosby, Genich Taguchi.

Unit II: TQM Principles - What is TQM?, What Does TQM Cover?, Guiding Principles of TQM, Managerial Perspective to TQM

Unit III: Statistical Process Control (SPC) and Other Quality Improvement Techniques –

Process Control Charts, Control Charts for variables and attributes, Pareto Diagrams, Scatter Diagrams, Run Charts, Cause and Effect Diagrams, Concept of six sigma.

Unit IV: TQM Tools - Benchmarking–Reasons to Benchmark, Benchmarking Process, Quality

Function Deployment (QFD), QFD Process, Benefits, Taguchi's Quality Loss Function, Total Productive Maintenance (TPM) – Concept, Improvement Needs, FMEA – Stages of FMEA.

Unit V: Quality Improvement Systems - Kaizen, Lean, Poka-Yoke, 5S, 3M, Quality Circles, Value Analysis and Value Engineering.

Unit VI: Business Process Reengineering - What is BPR?, Need for BPR, BPR in USA, Europe, India.

Suggested Readings

1. Total Quality Management, Dale H. Besterfield, et al., Pearson Education Asia, 1999. (Indian reprint 2002)
2. The Management and Control of Quality, James R. Evans & William M. Lindsay, (5th Edition), South-Western (Thomson Learning), 2002 (ISBN 0-324-06680-5).
3. Total Quality Management, Feigenbaum, McGraw-Hill, 1991
4. Total Quality Management, Poornima M. Charantimath, 2nd Edition, Pearson Education
5. TQM an Integrated Approach, Shailendra Nigam, Excel Books

GROUP J

BANKING & FINANCIAL SERVICES MANAGEMENT

SP01 : PCB3EJ1 : Banking Operations and Services

Unit I: Overview - Definition-utility of banks—banks and economic development -types of banks with their individual functions –Role of RBI – Monetary management –business in the globalized era, Rights of a banker, Clayton's case, Banker's Obligation to honour cheques, Secrecy of customers' accounts. Customers' Accounts -.Introduction for opening new accounts, opening of savings, current and fixed deposit accounts Minor's accounts, Club accounts, Partnership accounts, Joint stock company's account. Attorney's account, Joint accounts, Insolvency of the customer

Unit II: Payment and Collection of Cheques - Form of Cheque, Date, Amount, Insufficiency of funds, customer's signature, Countermanding payment of cheque, Crossing, Not Negotiable Crossing, Endorsements and Effect of Material Alterations. Liability for conversion, Protection to the collecting Banker, Duties of Collecting Banker.

Unit III: Bills of Exchange - Definition, Parties, Accommodation Bill, Calculation of Date of Maturity, Dishonour of Bills, Noting and Protesting, Drawee in Case of Need. Bank Drafts - salient features

Unit IV: Advances - Advances against various securities, Life Policy, Fixed Deposit Receipt, Goods, Shares, Advances against Guarantees, Advances to Small-scale industries, Registration of Charge under Companies Act, 1956. Accounts Receivable financing Advances for priority sectors— Hypothecation, Documentation.

Unit V: Investment Banking services: Fee based and Fund based services: Credit Cards, Debit Cards, , Venture Capital, Factoring, Forfeiting and Bill Discounting. Leasing and Hire Purchase, Housing Finance, Other investment banking services including distribution of Insurance and Mutual fund products, PMS – Process and monitoring.

Unit VI: Merchant Banking Services - Merchant Banking: An Introduction, Issue Management, Corporate Restructuring and Mergers and Project Financing. Securitization. Credit Rating.

Suggested Readings:

1. Basics of Banking IIBF, Mumbai Taxmann Publications – paper I
2. Banking Law & Practices by H.C. Agarwal, Siwan Publications. –paper I
3. Indian Financial System & Commercial Banking by Shri B. Raviramchandran, Dr. Dwivedi et al, IIBF, Mumbai Paper I
4. An introduction to documentary Credit – RupNarayan Bose, Macmilan India Ltd. New Delhi –paper I
5. Financial Institutions, Markets & money by David S. Kidwell & others, John Willy & Sons

SP02 :PCB3EJ2: Bank Financial Management

Unit I: Objective of bank management - Raising financial resources of different types at most competitive rates; deployment of funds profitably in various avenues such as loans, securities, project finance, etc.; management of various risks accompanying these functions; compliance with various regulations; keeping expenses under control and optimizing the value to the shareholders.

Unit II: Bank Profitability and Productivity-Analysis of Bank profits - computation of profit - various components of costs and yields and their parameters - indicators of return to shareholders. Need for growth – inter-dependability of growth in profits and in assets - growth of profits through improvement in efficiency (operating profitability and asset utilization) and through growth in assets (equity multiplier) - limitations on growth (regulation - risk management - technology and other costs - economic cycles)

Unit III: Bank capital and Treasury Management - Need for Bank Capital, Ideal Characteristics of Bank Capital, Common Stock, Financial Flexibility, Capital Adequacy. Treasury Management - Concept and Practice

.Role of Treasury and ALCO in asset-liability management Risk Management - Credit Risk Definition, Credit Risk and its underlying risks -Default risk, Exposure risk, Recovery risk, Collateral risk, Third party guarantee risk

Unit IV: Liquidity Issues - Structuring of timing of cash flows - inflow / outflow. Identification of availability of liquidity sources to match specific liquidity needs over the time horizon of short, intermediate and long-term needs, Sourcing liquidity from the money market and dependence on Liquidity Adjustment Facility of the Central Bank. Tying up back stop facilities / line of credit for contingent needs; Use of other on-balance sheet and off-balance sheet instruments for liquidity; Developing suitable investment management strategies to synchronize with liquidity needs

Unit V: Liquidity Management - Objective of Liquidity Management - i) Liquidity management policies and plans, ii) Recognizing distinct liquidity needs - short, intermediate and long, iii) Recognizing distinct group of liquidity sources: liquidity through fresh borrowings, liquidity through repayments from borrowers, liquidity through statutory reserves. Determination of optimal level of liquidity in terms of CRR and SLR.

Unit VI: Interest rate management -Fundamental factors affecting interest rates - Concept of interest,time,liquidity preferences, role of expectation in the interest rate formation, nominal and real interest rates, interest rate theories, role of the central bank in liquidity management, Role of Money Market and sources of liquidity in the Indian money market, RBI's policy and impact of Liquidity Adjustment Facility (LAF)

Suggested Readings

1. [Financial Management- Theory and Practice, 6th Ed.,- Prasanna Chandra](#)
2. Financial Management- Theory and Practice, Khan & Jain
3. [Finance for Managers - Harvard Business Essentials](#)
4. [BUSINESS MASTERMINDS: WARREN BUFFETT](#)by- 5. Financial Management- I M Pandey
- 6. Treasury Management & Risk Management by Trivedi&Hasan, Genesis Publishers, Mumbai. – Paper V

GROUP K

AGRI-BUSINESS MANAGEMENT

SP01 : PCB3EK1 : Agro-Input Management

Unit1: Fertilizers: Introduction, Concept of Agricultural Inputs; Role of fertilizer in agriproduction, raw materials needed for and principles of manufacture of nitrogen, phosphatic, and potassic fertilizers, secondary nutrient sources and micronutrients formulation; infrastructures for marketing and distribution of fertilizers; fertilizer quality control and pricing policy, constraints in fertilizer use and emerging scenario of fertilizer use, scope of bio-fertilizers; environmental pollution due to fertilizers. fertilizer sampling, quality evaluation, formulation of fertilizer mixture, and methods of fertilizer recommendation for crops, study of fertilizer marketing systems.

Unit 2: Agro-Input Management: Demand and supply scenario of major agro inputs seed, fertilizers, agrochemical tractor and other farm machines, pricing agro inputs; information system for agro-input marketing, Role of trade fairs like Agro Vision.

Unit 3: Agro-Chemicals & Technology Management: Role, status and organisation of agro-chemical industry in the Country; alternate of novel methods of pest control, integrated pest management; role of biological controls as plant protection methods; methods of quality control qualitative and quantitative agrochemicals and residue analysis; guidelines for the use of agrochemicals, environment; adulteration and legal requirements.

Unit 4: Seed Production Technology: Importance of quality seeds in agriculture; principles and methods of seed production of cereals, pulses, oilseeds and miscellaneous field crops; principles of seed certification and certification agency, seed laws and seed law enforcement; seed processing drying, cleaning, grading, treatment, weighing, bagging and handling of seeds;

Unit 5: Seed Processing: Installation and management of seed processing plants-Seed storage; loss of seed viability during storage; seed packaging storing breeder, foundation and certified seeds; Seed industry in India-present status and future prospects

Unit 6: managing seed industry: Role of public, private and cooperative sectors; national policy and programmes seed demand and supply; forecasting seed demands; seed trade and export potential, organization of seed industry in India; Human resource development in seed industry, managing seed industry efficiently.

Suggested Readings

1. Agri Business Management/Himanshu. Jaipur, Ritu
2. Encyclopaedia of Agricultural Marketing : Marketing of Farm Inputs Seed, Fertilizer and Irrigation, Vo. IX/Jagdish Prasad
3. Advances in Seed Science and Technology, Vol. I : Recent Trends in Seed Technology and Management/edited by K. Vanangamudi, N. Natarajan, K. Natarajan, A. Bharathi, R. Umarani and T. Saravanan
4. Seed Technology/DhirendraKhare and Mohan S. Bhale
5. Plant Compost-Manure and Agro-Chemicals Analysis : A Laboratory Manual/P.K. Behera
6. Agro Based Hand Book of Cultivation, Plantation and Farming : With Directory of Manufacturers/Suppliers of Agricultural Equipments& Implements and Suppliers of Agricultural Fertilizer, Seeds, Chemicals etc
7. Industrial Agriculture/PaymanMahasti

SP02: PCB3EK2 : Livestock Management

Unit 1: Livestock Industry: Present status of livestock products industry in India-dairy, meat, poultry, skin, hides,-wool; selection of livestock type, production and processing units; processing industry in India; alternate production and processing technology; demand scenario for livestock products in domestic and global markets; improvement in products through disease control;

Unit 2 :Feed Business Management: Role of management in feed manufacturing industry, organizing and planning feed manufacturing unit with special emphasis on design of manufacturing processes, equipment, material handling and physical facilities, control procedures in feed manufacturing units with emphasis on inventory management, developing and evaluation of purchasing organisations system, planning and production of good quality feeds, quality control of raw material and finished products, regulations relating to the manufacture and sale of feed stuff

Unit 3: Storage and transport: Veterinary advisory services, extension activities, quality control system; packaging, preservation and storage systems for livestock products; transport means for domestic and global markets; quality control during storage & transit; extent of losses during storage and transport and ways to minimize the same; slaughtering and processing-plant design and operations; treatment of by- products; marketing and distribution of animal products existing and desired; quality standards for various products, and environmental and legal issues.

Unit 4: Poultry and Hatchery Management: Poultry and hatchery industry, role of management in poultry industry establishing a poultry and hatchery unit -location, size and construction, equipment and physical facilities, organizing and managing poultry. Incubation and hatching, production of quality chicks and eggs, factors affecting hatchability, bio security and hatchery sanitation, handling of hatching eggs,

Unit 5: maintaining chick quality: -chick grading, sexing, packing, dispatch, transportation and chick delivery, franchise hatcheries, custom hatching, brooding, growing and laying management, crises management, industrial feeding, housing and disease management, waste

management, record management accounting and budgetary control, risks and insurance, personnel management including wages and salaries, job evaluation and employee appraisal,

Unit 6: Marketing of Livestock : Direct sale and sale through franchisees/ agents, advertisement, sale and after sale services, other innovative sales strategies. Management- direct sale and sale through franchisees/agents, advertisement, sale services, other innovative sales .recent trends

Suggested Readings

1. [Livestock Feeding Strategies for Dry Regions/edited by P.S. Pathak and S.S. Kundu](#)
2. [Trends in Livestock Research/S.K. Kaushish](#)
3. [Livestock Economy of India/P.C. Bansil and S.P. Malhotra](#)
4. [Sustainable Agriculture: Status and Prospects/P.N. Kalla, Anita Singh, S.S. Pareek, Shanti K. Sharma and Hanuman Ram](#)
5. [Hand Book of Poultry Farming and Feed Formulations](#)
6. [The Complete Technology Book of Dairy and Poultry Industries : With Farming and Processing](#)
7. [Fertility and Hatchability of Chicken and Turkey Eggs/Lewis W. Taylor](#)

Group L

Power Management

SP01 : PCB3EL1 :

CONVENTIONAL AND NON-CONVENTIONAL RENEWABLE ENERGY SYSTEMS

Unit I : Steam power stations: - Site selection, Prime movers, Arrangement of plant and principle auxiliaries, Operating costs.

Unit II : Hydro power stations: - Site selection, Prime movers, Arrangement of plant and principle auxiliaries, Operating costs, Surge tank and penstock.

Unit III : Nuclear power stations: - Fission and fusion technology fundamentals, Layout and reactors, Prospects and limitations.

Unit IV : Major non-conventional energy sources: - Solar energy, Wind Energy:- Principles, Scope and Availability.

Unit V : Other non-conventional/Renewable energy sources: - Ocean thermal energy, Tidal and wave energy, Geothermal energy, Principles, Scope and Availability.

Unit VI : Bio-energy: - Biomass and its uses, Classification of biomass as energy sources, Characteristics of bio-mass and its conversion process.

Suggested Readings

1. Generation of electrical energy by B.R. Gupta..
2. Elements of Power system design by M.V. Deshpande
3. Power Stations by Domkundwar
4. Renewable energy sources by Twidell and Weir, engineering language book society, London.
5. Energy Technology by S. Rao and Parulekar

SP02 : PCB3EL2: ENERGY AUDIT AND MANAGEMENT

Unit I :General energy problem, energy use pattern of various types of consumers, scope for energy conservation.

Unit II :Energy Audit, Energy monitoring, energy accounting and analysis.

Unit III :Auditing and targeting of electrical energy, electrical energy conservation in building and industries.

Unit IV : Load curve analysis and load management, energy efficient drives, Tariffs and power factor improvement.

Unit V :Economic operation of power plant operation, Economic scheduling of power stations.

Unit VI :Economic operation of power system, Demand side management: - Concepts, planning and implementation methods.

Suggested Readings

1. Generation of electrical energy by B.R. Gupta..
2. Energy and energy resource management by Mahajan, Agnihotri, Atparia. Deep and Deep publication P.Ltd.
3. Power Stations by Domkundwar
4. Energy Management by Paul W. and O'Callaghan, Mc Graw Hill, N.D.