

**PUNJAB TECHNICAL UNIVERSITY****MBA COURSE STRUCTURE**

CODE	SUBJECT	External Marks	Internal Marks	Total Marks
<b>SEMESTER- I</b>				
MB101	Principles & Practices of Management	60	40	100
MB102	Organizational Behaviour	60	40	100
MB103	Accounting for Management	60	40	100
MB104	Quantitative Techniques	60	40	100
MB105	Managerial Economics	60	40	100
MB106	Seminar on Executive Communication	00	100	100
MB107	Workshop on Computers for Management	00	100	100
MB108	Viva-voce			100
<b>SEMESTER-II</b>				
MB201	Business Environment	60	40	100
MB202	Production and Operations Management	60	40	100
MB203	Human Resource Management	60	40	100
MB204	Marketing Management	60	40	100
MB205	Financial Management	60	40	100
MB206	Workshop on Research Methodology	00	100	100
MB207	Workshop on Information Technology	00	100	100
MB208	Viva-Voce			100
<b>SEMESTER -III</b>				
MB301	Applied Operations Research	60	40	100
MB302	Corporate Legal Environment	60	40	100
MB303	Major-I	60	40	100
MB304	Major-II	60	40	100
MB305	Major-III/ Minor-I	60	40	100
MB306	Seminar on Management Information Systems	00	100	100
MB307	Presentation of Training Report	60	40	100
MB308	Viva-Voce			100
<b>SEMESTER- IV</b>				
MB401	Strategic Management	60	40	100
MB402	Project Evaluation & Implementation	60	40	100
MB403	Major-IV	60	40	100
MB404	Major-V	60	40	100
MB405	Major-VI/ Minor-II	60	40	100
MB406	Final Research Project			200
MB407	Viva-Voce			100

Note: (1) A team of two examiners will evaluate the Final Research Project. There will be one external and one internal examiner, each evaluating out of 100 marks. The institute will select and invite an external examiner for the evaluation.

(2) The viva-voce examination in all the four semesters will be conducted as provided for in the ordinances for M.B.A.

**There will be six to eight week training in any commercial or non-commercial institute after 2<sup>nd</sup> semester.**

**PUNJAB TECHNICAL UNIVERSITY****SPECIALIZATION COURSE STRUCTURE**

CODE	SUBJECT	External Marks	Internal Marks	Total Marks
<b>MARKETING</b>				
MB601	Marketing Research	60	40	100
MB602	Consumer Behaviour & Promotion Management	60	40	100
MB603	Services Marketing	60	40	100
MB604	Product & Brand Management	60	40	100
MB605	Sales, Channel & Logistics Management	60	40	100
MB606	International Marketing	60	40	100
MB607	Rural Marketing	60	40	100
<b>FINANCE</b>				
MB621	Financial Services	60	40	100
MB622	Security Analysis & Portfolio Management	60	40	100
MB623	Management of Banking & Financial Institutions	60	40	100
MB624	Direct Tax Planning	60	40	100
MB625	International Finance	60	40	100
MB626	Working Capital Management	60	40	100
MB627	Management Control Systems	60	40	100
MB628	Financial Engineering	60	40	100
<b>OPERATIONS</b>				
MB641	Quality Management	60	40	100
MB642	Production Planning & Control	60	40	100
MB643	Inventory Management	60	40	100
MB644	Purchasing Management	60	40	100
MB645	Technology Management	60	40	100
MB646	Manufacturing Policy & Implementation	60	40	100
<b>HR</b>				
MB661	Organisation Development	60	40	100
MB662	Training & Development	60	40	100
MB663	Advanced Industrial Psychology			
MB664	Industrial Relations & Labour Laws	60	40	100
MB665	Social Security & Labour Welfare	60	40	100
MB666	Performance & Compensation Management	60	40	100
MB667	International Human Resource Management	60	40	100
<b>INFORMATION TECHNOLOGY</b>				
MB681	Programming in C/ C++	60	40	100
MB682	Relational Database Management System	60	40	100
MB683	Software Engineering	60	40	100
MB684	Advanced Decision Support System	60	40	100
MB685	Introduction to Computer Network	60	40	100
MB686	E-Commerce & IT Enabled Services	60	40	100
MB687	Visual Programming	60	40	100

**Note: A team of two examiners will evaluate the Final Research Project. There will be one external and one internal examiner, each evaluating out of 100 marks. The institute will select and invite an external examiner for the evaluation.**

**PUNJAB TECHNICAL UNIVERSITY**

**COURSE STRUCTURE FOR SPECIALIZATION**

Student will have option to select either :  
 Super Specialization  
 Major & Minor combination (4+2)

**MAJOR/ MINOR COMBINATION**

In III Semester  
 Two subjects of major specialization  
 One subject of minor specialization

In IV Semester  
 Two subjects of same major specialization  
 One subject of same minor specialization

**Student opting for a specialization either as major or as a minor, must study these subjects:**

	<b>To be opted in</b>
<b>MARKETING</b>	
Marketing Research	MBA III Semester
Consumer Behaviour & Promotion Management	MBA IV Semester
<b>FINANCE</b>	
Security Analysis & Portfolio Management	MBA III Semester
Management Control Systems	MBA IV Semester
<b>OPERATIONS</b>	
Production Planning & Control	MBA III Semester
Quality Management	MBA IV Semester
<b>INFORMATION TECHNOLOGY</b>	
Programming in C/ C++	MBA III Semester
E-Commerce & IT enabled services	MBA IV Semester
<b>HUMAN RESOURCE MANAGEMENT</b>	
Organisation Development	MBA III Semester
Industrial Relation & Labour Laws	MBA IV Semester

**PUNJAB TECHNICAL UNIVERSITY**

**PRINCIPLES & PRACTICES OF MANAGEMENT (MB-101)**

Max. Marks: 100

External Assessment: 60

Internal Assessment: 40

Definition, nature, purpose and scope of management. Functions of a manager, an overview of planning, organizing and controlling. Is managing a science or art? Ethics in managing and social responsibility of managers.

Evolution of management thought. Contributions made by Taylor, Gantt, Gilbreth, Fayol, Weber, Elton Mayo, Chester Bernard, Maslow, Herzberg, Likert and McGergor. Management Science, Operations Research/Mathematical School/ Decision Theory approach. Systems Approach: Key concepts in systems - Closed system versus open system. Subsystems, System Boundary. McKinsey's 7-S Approach..

Planning: Types of plans, steps in planning, and process of planning. Nature of objectives, setting objectives. Concept and process of Managing by Objectives. Nature and purpose of strategies and policies. Strategic planning process. SWOT analysis, Portfolio matrix, premising and forecasting.

Decision-Making: Importance and steps in Decision Making; Traditional approaches to decision-making; Decision making under certainty - programmed decisions; Introduction to decision-making under uncertainty, non- programmed decisions; decision tree; group-aided decisions; Brain storming; Creativity - creative problem solving.

Organizing: Concept of organization, process of organizing, bases of departmentation, Authority & power - concept & distinction. Line & Staff concept; problems of use of staff & ways to avoid line-staff conflict, Delegation - concept of delegation; elements of delegation - authority, responsibility, accountability. Reasons for failure of delegation & how to make delegation effective. Decentralization - concept, reasons for decentralization and types (or methods) of decentralization. Span of Management - concept, early ideas on span of management, factors determining effective span-situational approach.

Coordination- Concept and importance of coordination; factors which make coordination difficult; techniques or methods to ensure effective coordination.

Control: Concept, planning-control relationship, process of control -setting objectives, establishing standards, measuring performance, correcting deviations. Human response to control. Dimensions or Types of Control -(a) Feed forward control (b) Concurrent Control (Real Time Information & Control), (c) Feedback Control v) Techniques of Control - Brief review of Traditional Techniques & Modern Techniques of Control.

Comparative study: Comparative study of main features of Japanese Management and Z-culture of American Companies.

## Recommended Text Books

Sr	Author	Books	Publisher
1	Harold Koontz & Heinz Weirich	Essentials of Management	Tata McGraw Hill
2	Stoner, Freeman, Gilbert Jr.	Management	Prentice Hall

## Reference Books

Sr	Author	Books	Publisher
1	Heinz Weirich & Harold Koontz	Management (A Global Perspective)	Tata McGraw Hill
2	Kreitner	Management	AITBS
3	Stephen Robbins & Coulter Mary	Management	Prentice Hall India
4.	Richy W.Griffin	Management	AITBS
5	Terry & Franklin	Fundamentals of Management	Pear son Education Asia
6	Robins	Principles of Management	AITBS

**PUNJAB TECHNICAL UNIVERSITY****ORGANISATIONAL BEHAVIOUR (MB-102)****Max. Marks: 100****External Assessment: 60****Internal Assessment: 40**

Organizational Behaviour –Definition of OB, contributing discipline to OB. Challenges and Opportunities for OB.

Foundations of Individual behaviour-biographical characteristics, ability, and learning.

Values, Attitudes and Job Satisfaction

Personality and Emotions

Perception

Motivation – Concept, Theories of Maslow, Herzberg, McClelland, Porter & Lawler Model, Application of Motivation concept,

Foundations of Group Behaviour-Group formation, development and structure, group processes, Group Decision-Making techniques, work teams.

Interpersonal Skills-Transactional Analysis, Life Positions, Johari Window.

Leadership: Concept, theories, Styles and their application

Power and Politics in organization

Conflict Management, Stress Management, Crisis Management

Organisational Change & Development, Innovation, Creating learning organization,

Emotional Intelligence –Concept

Organisational Culture, Cross-Cultural Behaviour

Organisational Effectiveness

**Recommended Text Books**

Sr.	Author	Title	Publisher
1.	Robbins	Organisation Behaviour	Pearson Education Asia
2.	Luthans	Organisation Behaviour	Tata McGraw Hill
3.	Udai Pareek	Understanding Organisation Behaviour	Oxford Publishing House

**Reference Books**

Sr.	Author	Title	Publisher
1.	Hersey, Blanchard & Johnson	Management of Organisational Behaviour	Prentice Hall India
2.	Newstrom & Davis	Organisational Behaviour: Human Behaviour at Work	Tata McGraw Hill
3	Rallinson, Broadfield & Edwards	OB & Analysis	Addison Wesley
4	Aswathappa	Organsiation Behaviour	Himalaya

**PUNJAB TECHNICAL UNIVERSITY****ACCOUNTING FOR MANAGEMENT (MB-103)****Max. Marks: 100****External Assessment: 60****Internal Assessment: 40**

**Introduction of accounting** — accounting as an information system, concepts, convention and principles of accounting,, Role of accountant in an organization. Branches of accounting: Financial, Cost and Management Accounting and their inter-relationships

Accounting Cycle, Preparation of financial statements of an organization (with adjustment)

**Financial Analysis** — Concepts and objectives. Tools of Financial Analysis- ratio analysis, common size financial statements, trend analysis, fund flow and cash flow statements.

**Cost Accounting** — Meaning, Scope and Classification of costs, Absorption costing, marginal costing, break-even analysis, use of cost data in managerial decision-making.

**Cost Control Techniques** - Preparation of budgets and their control, Zero base budgeting. Standard costing and variance analysis, Responsibility accounting.

, **Introduction to emerging dimensions in accounting** — Price level accounting, human resource accounting, Social Accounting.

**Introduction to recent developments in cost management**— Target costing, Kaizen costing and activity based costing.

**Recommended Text Books**

S.No	Author	Title	Publisher
1	Pandey	Management Accounting	Vikas
2	Maheshwari	Financial Accounting	Vikas

**Reference Books**

S.No	Author	Title	Publisher
1.	Horngren, Sundem & Stratton	Introduction to Management Accounting	Prentice Hall India
2.	R.K, Lele, Jawahar Lal	Accounting Theory	Himalaya Publishing House
3.	L.S. Porwaa	Accounting Theory	Tata McGraw Hill
4.	A.K.Vashisht, J.S Pasricha	Management Accounting	Unistar Books Pvt.Ltd.
5.	S.P.Jain, K.L. Narang	Cost Accountmg Principles & Practices	Kalyani Publishers
6.	Bhattacharyya, JohnDearden	Costing for Management	Vikas Publishing House

**PUNJAB TECHNICAL UNIVERSITY****QUANTITATIVE TECHNIQUES (MB-104)****Max. Marks: 100****External Assessment: 60****Internal Assessment: 40**

Role of Mathematics and statistics in Business Decisions

Theory of Sets

Logarithms: Laws of operations, Log tables, compound interest, depreciation and annuities.

Equations: Linear, Quadratic &amp; Simultaneous Equations

Matrix Algebra

Binomial Theorem

Principles of Mathematical Induction, Arithmetic Progression &amp; Geometric Progression

Data Analysis: Measure of Central Tendency

Measures of Dispersion: Range Quartile Deviation, Mean Deviation, and Standard Deviation

Skew ness and Kurtosis

Correlation Analysis: Rank Method &amp; Karl Pearson's Coefficient of Correlation and Properties of Correlation.

Regression Analysis: Fitting of a Regression Line and Interpretation of Results, Properties of Regression Coefficients and Relationship between Regression and Correlation

Time Series Analysis

Index Numbers

Theory of Probability

Theoretical Distributions: Binomial, Poisson and Normal Distribution

Theory of Estimation

Testing of Hypothesis: Large Sample Tests, Small Sample test, (t, F, Z Test and Chi Square Test).

**Recommended Text Books**

<b>S.No</b>	<b>Author</b>	<b>Title</b>	<b>Publisher</b>
1.	Levins, Krehbiel & Berenson "	Business Statistics	Pearson
2.	Levin&Rubin	Statistics for Management	Prentice Hall
3.	Sancheti & Kapoor	Business Mathematics	Sultan Chand
4.	Gupta	Statistical Methods	Sultan Chand

**PUNJAB TECHNICAL UNIVERSITY****MANAGERIAL ECONOMICS(MB. 105)****Max. Marks: 100****External Assessment: 60****Internal Assessment: 40**

Introduction to Managerial Economics: Scope of Managerial Economics and other disciplines, Basic economic concepts in decision-making. Distinction between Micro and Macroeconomics.

Demand analysis: Types, determinants, elasticity, demand function, Demand forecasting.

Cost Analysis: Concept of cost and its types, cost output relationship in short and long period, supply curve. Iso-quant curves, Indifferences curves.

Pricing analysis: Market structures, price determination under different market situations, price discrimination, selling costs, product differentiation, Various pricing methods, transfer pricing, break even analysis, profit planning.

National income analysis: Techniques of social accounting. Theories of income, output and employment: Classical Keynesian. Demand behaviour: Duessenbury and Friedman.

Theory of multiplier: Concept of static and dynamic multiplier, balanced budget multiplier. Income generation process through multiplier.

Theory of trade cycles: Concept and causes of trade cycles. Measures to control trade cycles.

Macro economic policy: Monetary and fiscal.

Theories of inflation: causes and control of inflation.

**Recommended Text Books**

S.No	Author	Title	Edition	Publisher
1.	K.K. Dewett	Modern Economic Theory	21 <sup>st</sup>	S.Chand
2 (a)	D.M. Mithani	Managerial Economics: Theory & Applications	1 <sup>st</sup>	Himalaya
2 (b)	H.L. Ahuja	Macro Economics – Theory & Policy	7 <sup>th</sup>	S. Chand

**Reference Books**

S.No	Author	Title	Edition	Publisher
1.	Mote, Paul, Gupta	Managerial Economics	1 <sup>st</sup>	Tata McGraw Hill
2.	D.N. Dwivedi	Managerial Economics	6 <sup>th</sup>	Vikas
3.	H.C. Peterson & W.C. Lewis	Managerial Economics	4 <sup>th</sup>	Prentice Hall India
4.	Edward Shapiro	Macro Economic Analysis	5 <sup>th</sup>	Galgotia
5.	A. Koutyiannis	Modern Micro Economics	2 <sup>nd</sup>	McMillan

**PUNJAB TECHNICAL UNIVERSITY****SEMINAR ON EXECUTIVE COMMUNICATION (MB-106)****Max. Marks: 100****Internal Assessment: 100**

Meaning and important of communication in business, the process of communication, models of communication, types of information-order, advise, suggestion, motivation, persuasion, warning and education.

Channels of communication, their effectiveness, limitations. Media of communication, barriers of communication, approaches to effective communication, tools of communication, Diction, sentence, paragraph, punctuation and report writing.

Group communication through committees, conference and other formal communication with public at large, interviews, seminar, symposia and conferences.

Specific business communication: essentials of effective business communication structure of business correspondence: inquires and replies, orders and their executions, complaints and adjustment, credit and status inquires, agency letters and sales letters.

Process for drafting Effective Business Message

Letter writing: Good news, Bad news, Informative news, Persuasive news, Memorandum drafting

E-mail writing

Report writing – Short & Long Formal Reports

Strategies to improve - reading skills, speaking skills, listening skills

Guidelines to effective public speaking

Developing job application – Covering letter, Resume

Interviewing: Negotiating the job offer

**Recommended Text Books**

S.No.	Author	Title	Publisher
1	Lesikar, Petit &	Lesikar's Basic Business	Tata McGraw
2	Flatly	Communication	Hill

**Reference Books**

S.No.	Author	Title	Publisher
1	Poe & Fruchling	Basic Communication	AITBS
2	Taylor	English Conversion Practice	Tata McGraw
3	Diwan & Aggarwal	Business Communication	Excel
4	Baugh, Frayer & Thomas	How to write first class Business Correspondence	Viva Books

**PUNJAB TECHNICAL UNIVERSITY****WORKSHOP ON COMPUTERS FOR MANAGEMENT (MB-107)**

Max. Marks: 100

Internal Assessment: 100

Introduction to Computers: Classification components of computer system.

Introduction to High level and low level languages.

Problem Analysis, flow charting and algorithm.

Software: system s/w, application s/w. Basic concepts of operating systems

Tally: Basics, Creating Companies, Various Accounts & Transactions, Ledgers, Balance Sheet, Ratio Analysis

Introduction to WWW, Internet and intranet, difference between Internet and intranet, sending and reading e-mails, fax.

Practical on Internet access to:

- Create E-mail address
- Perform transactions
- Send & receive messages
- Use of search engines

MS-Office 2000

Word processing: MS-Word, word basics, formatting text and documents, working with header and footer, footnotes, endnotes, tables and sorting, graphics, mail merge and macros.

Spreadsheets and their uses in business, Excel basics, rearranging worksheets, excel formatting techniques, using functions, chart features and working with graphics in excel.

Power Point: Basics, working with texts and graphics in Power Point. Delivering information with Microsoft Mail.

**Text Books:**

<b>Sr.</b>	<b>Author</b>	<b>Title</b>	<b>Publisher</b>
1	P.K.Sinha	Fundamental of Computers	BPB
2	Leon & Leon	Internet for Everyone	Leon Tech World
3	Curtin, Foley, Sen & Martin	Information Technology	Tata MCGraw Hill
4	Ron Masfield	MS-Office	Tech Publication

**PUNJAB TECHNICAL UNIVERSITY**  
**BUSINESS ENVIRONMENT(MB. 201)**

**Max. Marks: 100**  
**External Assessment: 60**  
**Internal Assessment: 40**

Introduction and definition of Business and its emergence in the 21<sup>st</sup> century. The concept of environment, components of environment: economic, political, legal, social, technological & international. Need to scan the business environment and techniques of scanning the business environment.

Political Environment: Three political institutions- Legislature, Executive and Judiciary. Fundamental rights and Directive Principles of state policy. Rationale and extent of state intervention.

Economic environment: Economic systems, economic planning in India, objectives, strategies and evaluation of current five year plan. Industrial policy and industrial licensing. New economic policies.

Legal Environment: company regulatory legislations in India, MRTP, FEMA, EXIM in light of liberalization policies. SEBI guidelines relating to capital issues.

Public sector in India: concepts, philosophy and objectives, performance, problems and constraints. Privatisation. Joint sector and co-operative sector in India.

Social environment: social responsibility of business, consumer movement & Consumer Protection Act 1986, The Environment Protection Act 1986.

Technological environment: Impact of technology on business. Technological policy, import of technology, appropriate technology, problems in technology transfer.

International environment: Emergence of globalisation. Control of foreign direct investment, benefits and problems from MNCs. WTO, its role and functions, implications for India. Trading blocks.

### Recommended Text Books

S.No	Author	Title	Edition	Publisher
1.	Aswathappa	Essential of Business Environment	7 <sup>th</sup>	Himalaya
2.	Sengupta	Government & Business	6 <sup>th</sup>	Vikas

### Reference Books

S.No	Author	Title	Edition	Publisher
1.	Aggarwal & Diwan	Business Environment	1 <sup>st</sup>	Excel
2.	Cherunilam	Business Environment	8 <sup>th</sup>	Himalaya
3	Kazmi	Business Policy & Strategic Management	2 <sup>nd</sup>	TataMcGraw-Hill

**PUNJAB TECHNICAL UNIVERSITY**  
**PRODUCTION & OPERATIONS MANAGEMENT(MB. 202)**

**Max. Marks: 100**

**External Assessment: 60**

**Internal Assessment: 40**

Operations Management - Concepts; Functions  
 Product Design & Development - Product Design and its Characteristics; Product Development Process (Technical); Product Development Techniques.  
 Process Selection - Project, Job, Batch, Mass & Process types of Production Systems;  
 Product - Process Mix  
 Facility Location - importance; Factors in Location Analysis; Location Analysis Techniques  
 Facility Layout - Objectives; Advantages; Basic Types of Layouts  
 Capacity Planning - Concepts; Factors Affective Capacity. Planning, capacity Planning Decisions.  
 Production Planning & Control (PPC) - Concepts, Objectives; Functions  
 Work Study - Productivity; Method Study; Work Measurement.  
 Materials Management - Concepts, Objectives,  
 Introduction to modern Productivity techniques-just in time, Kanban system , Total quality management & six sigma.  
 Functions Purchasing Management - Objectives; Functions; Methods; Procedure  
 Stores Management - Types of Stores; Functions; Coding Methods  
 Value Analysis - Concepts  
 Inventory Management - Concepts; Classification; Objectives; Factors Affecting Inventory Control Policy; Inventory Costs; Basic EOQ Model; Re-order Level; ABC Analysis  
 Maintenance Management - Concepts; Objectives; Functions; Types of Maintenance  
 Quality Management - Quality Concepts, Difference Between Inspection, Quality Control, Quality Assurances, Total Quality Management; Control Charts; acceptance Sampling

**Recommended Text Books**

S.No	Author	Title	Edition	Publisher
1.	Nair	Production & Operation Management	1 <sup>st</sup>	Tata McGraw Hill
2.	Adam & Ebert	Production & Operation Management	5 <sup>th</sup>	Prentice Hall India

**Reference Books**

S.No	Author	Title	Edition	Publisher
1.	Krajewski & Ritzman	Operations Management	5 <sup>th</sup>	Pearson
2.	Buffa & Sarin	Modern Production/Operations Management	8 <sup>th</sup>	John Wiley
3.	Chary	Production & Operations Management	2 <sup>nd</sup>	Tata McGraw Hill

**PUNJAB TECHNICAL UNIVERSITY**  
**HUMAN RESOURCE MANAGEMENT (MB-203)**

**Max. Marks: 100**

**External Assessment: 60**

**Internal Assessment: 40**

Introduction: Meaning, scope, objectives functions, policies & roles and importance of Human Resource Management, HRM & HRD a comparative analysis, Organizing the Human Resource Management department in the organization. Human Resource Management practices in India.

Human Resource Planning: Definition, objectives, process and importance  
 Job analysis, description, specification & job evaluation

Recruitment, selection, placement and induction process.

Human Resource Development: Concept, Employee training & development  
 Career Planning & development

Performance management: concept & process, performance appraisal,  
 Potential appraisal

Job Compensation: Wage & salary administration, incentive plans & fringe benefits

Promotions, demotions, transfers, separation, absenteeism & turnover.

Quality of work life (QWL): Meaning, origin, development and various approaches to QWL, techniques for improving QWL.

Quality circles: concept, structure, role of management quality circles in India

Job satisfaction and morale.

Health, Safety & Employee welfare.

Counseling for effective Human Resource Development.

Human Relations: definition, objectives & approaches to human relations,

Employee grievances and discipline, participation & empowerment,

Introduction to collective bargaining

HR Audit.

Introduction to Business Ethics

Recommended Text Books

Sr.	Author	Title	Publisher
1.	V.S.P.Rao	Human Resources Management	Excel
2	C.B.Memoria	Personnel Management	Himalya
3	Edwin B.Flippio	Personnel Management	Tata McGraw Hill
4	Dale Yoder	Personnel Management & Industrial Relation	
5	Arun Monappa & Saiyadain	Personnel Management	Tata Mc Graw Hill
6	V.P.Michael	HRM & Human Relations	Himalays
7	R.S.Dwivedi	HRD in Indian Companies	McMillan India
8	Gray Dersler	Human Resource Management	

**PUNJAB TECHNICAL UNIVERSITY**  
**MARKETING MANAGEMENT(MB 204)**

**Max. Marks: 100**  
**External Assessment: 60**  
**Internal Assessment: 40**

Marketing Concepts and orientations, Marketing Tasks, Marketing in modern context.

Strategic Planning, Marketing System & Marketing Environment, Marketing Planning & Marketing Process.

Marketing Information System : Concept and Components.

Consumer Behaviour : Factors influencing consumer buying behaviour, Buying process.

Market Segmentation & Targeting.

Product Decisions: Product Mix, Differentiation & Positioning, New product development, Consumer adoption process, Product Life Cycle and strategies, Packaging, Labeling, Branding.

Pricing Decisions: Objectives, Factors affecting pricing decisions, Pricing Methods, Pricing Strategies.

Channel Decisions: Nature and types of Marketing Channels, Channel Design and Channel Management Decisions, Retailing, Wholesaling, Physical distribution.

Promotion Decisions : Communication process, Promotion Mix, Advertising, Sales Promotion, Public Relations, Managing the Sales force.

Introduction to strategic management.

Introduction to E-Commerce.

Organising for marketing, Marketing Implementation & Control.

### Recommended Text Books

S.No	Author	Title	Edition	Publisher
1.	Kotler	Marketing Management	10 <sup>th</sup>	Prentice Hall India

### Reference Books

S.No	Author	Title	Edition	Publisher
1.	Saxena	Marketing Management	1 <sup>st</sup>	Tata McGraw Hill
2.	Stanton, Etzel & Walker	Fundamentals of Marketing	10 <sup>th</sup>	Tata McGraw Hill
3.	Ramaswamy & Namakumari	Marketing Management	2 <sup>nd</sup>	McMillan
4.	Gandhi	Marketing – A Managerial Introduction		TMH
5.	Kotlar & Armstrong	Principles of Marketing	8 <sup>th</sup>	Prentice Hall India

## PUNJAB TECHNICAL UNIVERSITY

FINANCIAL MANAGEMENT (MB-205)

**Max. Marks : 100**

**External Assessment : 60**

**Internal Assessment : 40**

Evaluation of Financial-management, scope and objectives of financial management .  
 Capital Budgeting: Capital Budgeting process , Project formulation & Project Selection.  
 Introduction to various capital Budgeting Techniques; Payback Period Methods, Average rate of return , Net Present Value methods, IRR, Benefit-Cost ratio, capital Rationing .  
 Source of Long Term funds: Equity shares , Preference share , Debentures, public deposits, factors affecting long term funds requirements.

Lease financing: Concepts , types. Advantages and disadvantages of leasing .

Capital structure : Determinants of Capital Structure, Capital structure theories, Cost of Capital, Operating and Financial Leverage .

Working capital : Concept factors affecting working capital requirements, determining working capital requirements , Sources of working capital.

Management of Retained Earnings: Retained earnings & Dividend policy, Consideration in dividend policy, Forms of Dividends theories, Bonus Shares.

Corporate Restructuring : Reasons and factors affecting Mergers, Acquisitions, takeovers and sell-offs.

Recent Developments—Introduction to concepts of EVA, MVA and CAPM.

### Recommended Text Books

S. No.	Author	Title	Publisher
1	I.M. Pandey	Financial Management	Vikas publishers
2.	Khan & Jain	Financial Management	Tata McGraw Hill
3.	Prasanna Chandra	Financial Management ( Theory & Practice)	Tata McGraw Hill

### Reference Books

S. No.	Author	Title	Publisher
1.	James C. Van Horne	Financial Management & Policy	Pearson Education Asia
2.	james C. Van Horne & john M.	Fundamentals of Financial Management	Pearson Education Asia
3.	Brealy & Myres	Principles of Corporate Finance	Tata McGraw Hill
4.	John J. Hampton	Financial Decision Making Concept, Problem & Cases	Prentice Hall India
5.	P.V.Kulkarni B.G.Sathyaprasad	Financial Management	Himalaya Publishing House
6.	Lawrence J. Gitman	Principles of Management	Pearson Education

**PUNJAB TECHNICAL UNIVERSITY****WORKSHOP ON RESEARCH METHODOLOGY (MB 206)**

Max. Marks: 100

Internal Assessment : 100

Introduction to Research : Definition, scope, Limitations, and Types.

Objectives of research

Research Process

Research Designs

Defining a research problem

Evaluating the research design for a decision situation

Data types : Nature and measurement  
nominal, ordinal, interval & ratio data

Non parametric test : Sign test for paired data

Data Collection: Secondary Data, Primary Data, and Methods of Collection.

Scaling Techniques: Concept, Types, Rating, scales &amp; ranking Scales

Scale construction Techniques, Multi Dimensional Scaling.

Sampling Designs: Concepts, Types and Techniques

Sample Size Decision

Theory of Estimation and Testing of Hypothesis

Small &amp; Large Sample Tests, Tests of Significance based on t, F, Z test and Chi-Square test .

Designing Questionnaire.

Interviewing.

Report writing : Contents of report

Tabulation, Coding, Editing.

Executive Summary

Bibliography format

Presentation of report and acceptance Problem

## Recommended Text Books

Sr.	Author	Title	Publisher
1	Cooper & Schindler	Business Research Methods	Tata McGrawHill
2	Goods & Hatt	Methods in Social Research	Tata McGraw Hill
3	Kothari	Research Methodology	Vishwa Prakashan

**PUNJAB TECHNICAL UNIVERSITY****WORKSHOP ON INFORMATION TECHNOLOGY (MB-207)**

Max. Marks: 100

Internal Assessment: 100

MS Access: Creating database, adding, deleting and moving records; Querying: creating, saving and editing; creating and using forms, creating and printing reports.

Information Technology: Introduction, New Developments, Information Systems, Software and data, application of IT in Business & Industry, Home, Education & Training, Entertainment & Arts, Science, Engineering and Math.

Communication – The Electronic Web : Network Applications : Fax, voice, Information Services, Person to person Communication, Group Communication;

Computer Network & Communication : Network types, Network topologies, Network Communication Devices, Physical Communication Media, Network Protocol (TCP/ IP)

Range of Application: Scientific, Business, educational, Weather forecasting & Remote Sensing Decision Support System, Inventory, Railways etc.

MS Access: Creating database, adding, editing and moving records; Querying: Creating, Saving and Editing; Creating and using forms; Creating and Printing Reports; Managing Data and Files.

**Text Books:**

<b>Sr.</b>	<b>Author</b>	<b>Title</b>	<b>Publisher</b>
1	P.K.Sinha	Fundamental of Computers	BPB
2	Leon & Leon	Internet for Everyone	Leon Tech World
3	Curtin, Foley, Sen & Martin	Information Technology	Tata MCGraw Hill
4	Ron Masfield	MS-Office	Tech Publication

**PUNJAB TECHNICAL UNIVERSITY**  
**APPLIED OPERATIONS RESEARCH(MB 301)**

**Max. Marks: 100**  
**Internal Assessment: 40**  
**External Assessment: 60**

Introduction to OR Managerial Decision Making and OR.  
 OR Models: Principles and Types.  
 Linear Programming: Problem Formulation, Graphical & Simplex Method, Duality, and Sensitivity Analysis  
 Transportation Models, Transshipment Problem, Traveling Salesman Problem, Assignment Models.  
 Replacement Models.  
 Queuing Theory : Models (M/M/1) : (FcFs/∞); (M/M/1) : (FcFs/N); (M/Ek/1): (FcFs/∞) and (M/M/C/) : ((FcFs/N)  
 Inventory control (deterministic Models only)  
 Dynamic Programming.  
 Game Theory.  
 PERT-CPM  
 Decision Making: Decision making environment, decision under uncertainty, decision under risk, decision tree analysis.

**Recommended Text Books**

S.No	Author	Title	Edition	Publisher
1	J K Sharma	Quantitative Techniques for Managerial Decisions.	1st	Macmillan
2	N D Vohra	Quantitative Techniques in Management	2nd	Tata McGraw Hill
3	S.D.Sharma	Operations Research	12th	Kedar Nath Ram Nath & Co
4	V.K.Kapoor	Operations Research	7th	Sultan Chand
5	Lee, Moore, Taylor	Management Science		
6	S.M.Lee (et.Al)	Management Science		

**Reference Books**

S.No	Author	Title	Edition	Publisher
1.	Tulsian & Pandey	Quantitative Techniques	1 <sup>st</sup>	Pearson Edn.
2.	Hillier & Lieberman	Introduction to Operations Research	7th	Tata McGraw Hill
3.	J. K. Sharma	Operations Research		McMillan
4.	H.A.Taha	Operations Research		
5.	C.K.Mustafi	Operations Research		
6.	Kanti Swaroop	Operations Research		
7.	Hira Gupta	Operations Research-		

**PUNJAB TECHNICAL UNIVERSITY**

**CORPORATE LEGAL ENVIRONMENT (MB-302)**

Max. Marks: **100**

**External Assessment: 60**

**Internal Assessment: 40**

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Law of Contract: Definition, offer and Acceptance, Consideration, Capacity of parties, Free Consent, Legality of Object, Performance and Discharge of Contract and Remedies for Breach of Contract. Introduction to the concept of agent and different types of mercantile agents.

Sale of Goods Act: Meaning, Formation of contract, Meaning of condition and warranties. Difference between Transfer of Property and Possession, Right of an Unpaid Seller.

Negotiable Instrument: Bills of Exchange, Promissory Note, Cheque and Rules Regarding the Crossing of Cheques. Dishonor of cheques and liability of banker and drawer.

Law of Insurance: Fundamentals Elements of Insurance.

Basic features of law relating to carriers (Air, Road, Rail and Shipping)

Company law: Characteristic of Company, distinction between company and partnership. Kinds and Formation of Company, Meeting. Winding Up by court.

Taxation: Constitutional framework of taxation. Direct and indirect taxes. Basic features of Central excise, Customs, Central and state sales tax.

**Recommended Text Books**

<b>S.No</b>	<b>Author</b>	<b>Title</b>	<b>Publisher</b>
1,	Chawla, Garg & Sarin	Mercantile Law	Kalyani

**PUNJAB TECHNICAL UNIVERSITY**  
**SEMINAR ON MANAGEMENT INFORMATION SYSTEM(MB 306)**

**Max. Marks: 100**  
**Internal Assessment: 100**

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Introduction: Definition & Significance, Evolution, MIS Support for Programmed and Non-Programmed Decision Making, Model of Decision Making.

Structure of MIS: Based on Management Activity & Organisational Function, Conceptual & Physical Structure of MIS.

Systems Concept: Definition of a System, Types of Systems, Sub-System, and Systems Concepts & Organisation.

Information Concept: Definition of Information, Information Presentation, Quality of Information.

Decision Support Systems: Characteristics of DSS, Decision Support & Structure of Decision Making. Decision Support & Repetitiveness of Decisions. Classes of DSS, DSS Users, GDSS, Characteristics of GDSS.

Organisation & Information Systems : Relationship, Salient Feature of Organisation, Effect of organisation on Information Systems and Vice Versa.

Advanced Information Systems: Knowledge Work Systems, Executive Support Systems, Expert Systems Artificial intelligence.

ERP: An Introduction, Application Examples of Information Systems.

Introduction to CRM, Business intelligence, supply chain management, Business process re-engineering, Business Process management.

### Recommended Text Books

S.No	Author	Title	Edition	Publisher
1.	Laudon & Laudon	Management Information Systems: Organisation & Technology	7 <sup>th</sup>	Pearson
2.	Goyal	Management Information Systems: Managerial Perspectives		McMillan

### Reference Books

S.No	Author	Title	Edition	Publisher
1.	Alter	Information Systems: Management Perspective	3 <sup>rd</sup>	Pearson
2.	Murdick, Ross & Claggett	Information Systems for Modern Management	3 <sup>rd</sup>	Prentice Hall India
3.	Kanter	Managing with Information	4 <sup>th</sup>	Prentice Hall India
4.	Davis & Olson	Management Information Systems	2 <sup>nd</sup>	McGraw hill

**PUNJAB TECHNICAL UNIVERSITY****STRATEGIC MANAGEMENT(MB 401)****Max. Marks: 100****Internal Assessment: 40****External Assessment: 60**


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Definition, nature, scope, and importance of strategy; and strategic management (Business policy). Strategic decision-making. Process of strategic management and levels at which strategy operates. Role of strategists.

Defining strategic intent: Vision, Mission, Business definition, Goals and Objectives.

Environmental Appraisal—Concept of environment, components of environment (Economic, legal, social, political and technological). Environmental scanning techniques- ETOP, QUEST and SWOT (TOWS).

Internal Appraisal – The internal environment, organisational capabilities in various functional areas and Strategic Advantage Profile. Methods and techniques used for organisational appraisal (Value chain analysis, Financial and non financial analysis, historical analysis, Industry standards and benchmarking, Balanced scorecard and key factor rating). Identification of Critical Success Factors (CSF).

Corporate level strategies-- Stability, Expansion, Retrenchment and Combination strategies. Corporate restructuring. Concept of Synergy.

Mergers & Acquisitions.

Corporate Restructuring.

Business level strategies—Porter's framework of competitive strategies; Conditions, risks and benefits of Cost leadership, Differentiation and Focus strategies. Location and timing tactics. Concept, Importance, Building and use of Core Competence.

Strategic Analysis and choice—Corporate level analysis (BCG, GE Nine-cell, Hofer's product market evolution and Shell Directional policy Matrix). Industry level analysis ; Porters's five forces model. Qualitative factors in strategic choice.

Strategy implementation: Resource allocation, Projects and Procedural issues. Organisation structure and systems in strategy implementation. Leadership and corporate culture, Values, Ethics and

Social responsibility. Operational and derived functional plans to implement strategy. Integration of functional plans.

Strategic control and operational Control. Organistional systems andTechniques of strategic evaluation.

#### Recommended Text Books

S.No	Author	Title	Edition	Publisher
1.	Kazmi	Business Policy & Strategic Management	2 <sup>nd</sup>	Tata McGraw Hill
2.	Thomson & Strickland	Strategic Management: Concept & Cases	12 <sup>th</sup>	Tata McGraw Hill

#### Reference Books

S.No	Author	Title	Edition	Publisher
1.	Ghemawat	Strategy & The Business Landscape	1 <sup>st</sup>	Pearson Education Asia
2.	Ghoshal, Piramal & Budhiraja	World Class in India	1 <sup>st</sup>	Penguin
3.	Wheelen & Hungee	Strategic Management & Business Policy	6 <sup>th</sup>	Addison-Wesley
4.	Johnson & Scholes	Exploring Corporate Strategy	4 <sup>th</sup>	Prentice Hall India
5.	Jauch & Glueck	Business Policy & Strategic Management	5 <sup>th</sup>	Tata McGraw Hill
6.	Pearce & Robinson	Strategic Management	3 <sup>rd</sup>	AITBS

**PUNJAB TECHNICAL UNIVERSITY****PROJECT EVALUATION & IMPLEMENTATION (MB 402)****Max. Marks: 100****External Assessment: 60****Internal Assessment: 40**

Project: Definition, characteristics, importance, types, steps in identification of projects, project life-cycle.

Project management: meaning and scope.

Project appraisal: Technical appraisal, Environmental appraisal, Economic & market appraisal including market survey for forecasting future demand and sales.  
Managerial appraisal.

Financial appraisal: project cost estimation & working capital requirements, sources of funds, appropriate composition of funds (capital budgeting), preparation of projected financial statements viz. Projected balance sheet, projected income statement, projected funds & cash flow statements. Preparation of detailed project report. Project finance.

Need & techniques for ranking of projects : payback method, accounting rate of return, internal rate of return, net present value method, net terminal value method, multiple internal rate of return.

SCBA - meaning, rationale, approaches to SCBA SCBA by FI's : UNIDO approach, L-M approach, social appraisal of projects in developing countries with special reference to India.

Implementation of projects: Project scheduling & control, problems of project implementation, role of project manager, project audit.

Contract management: basic concept. Remedies for non-performance of contract.

**Recommended Text Books**

S.No	Author	Title	Edition	Publisher
1.	Prasanna Chandra	Projects, Preparation, Appraisal Budgeting & Implementation	4 <sup>th</sup>	Tata McGraw Hill

**Reference Books**

S.No	Author	Title	Edition	Publisher
1.	Maylor	Project Management	2 <sup>nd</sup>	Pearson
2.	Chong & Brown	Managing Project Risk	1 <sup>st</sup>	Pearson
3.	Ghattas & McKee	Practical Project Management	1 <sup>st</sup>	Pearson
4.	Narendra Singh	Project Management & Control	2 <sup>nd</sup>	Himalaya

**PUNJAB TECHNICAL UNIVERSITY****MARKETING RESEARCH (MB-601)**

**Max. Marks: 100**  
**Internal Assessment: 40**  
**External Assessment: 60**

**Basic concepts of Marketing Research - Introduction**

Marketing Research & MIS, Marketing Decision Support System,  
 Research Process

Research Design: Exploratory, Descriptive, and Experimental Designs

Methods of Data Collection, Scaling Techniques and questionnaire design.

Data Preparation

Data Analysis: Discriminant Analysis, Factor Analysis, Cluster Analysis, Conjoint Analysis, Multi Dimensional Scaling

Applications of Marketing Research:-

Sales Analysis, Market Potential Analysis, Sales Forecasting

Market Segmentation

Product Research: New Product Development Process, Test Marketing

Advertising Research: Media Research, Copy Testing

Pricing Research : Skimming and Penetration Pricing

Distribution Research : Warehouse Research, Retail Location Research

Brand Positioning

International Marketing Research

Motivation Research

**Recommended Text Books**

S.No	Author	Title	Publisher
1.	Naresh Malhotra	Marketing Research: Applied Orientation.	Pearson Education.
2.	Boyd, Westfall & Stasch	Marketing Research	AITBS
3.	Luck&Rubin	Marketing Research	Prentice Hall India

**Reference Books**

S.No	Author	Title	Publisher
1.	Tull&Hawkins	Marketing Research	Prentice Hall India
2.	Green, Tull & Albaum	Research for Marketing Decisions	Prentice Hall India
	G.C.Beri	Marketing Research	TataMcGraw Hill
4.	Mishra	Modern Marketing Research	Himalaya

**PUNJAB TECHNICAL UNIVERSITY**

**CONSUMER BEHAVIOUR & PROMOTION MANAGEMENT (MB-602)**

**Max. Marks – 100**

**External Assessment – 60**

**Internal Assessment - 40**

Concept of Integrated Marketing communication.  
Guidelines to develop effective integrated marketing communication  
Advertising: its definition, Objectives, Scope and Social Implications.  
Advertising as a communication Process, Communication Models: AIDA Modal,  
Lairdge – Steiner Model, Role of Advertising in Marketing Mix.  
Advertising Campaign: Introduction, Planning and Managing, Advertising Budget,  
Marketing Strategies.  
Media: Types of Media, Media Planning, Media Selection, and Multi-Media Strategies.  
Creative styles. Guidelines for copywriting, Copywriting for print, Audio, TV and  
outdoor media. Advertising layout.  
Evaluation of Advertisements: Measuring Advertising Effectiveness.  
Advertising Agencies: Structure, Functions and Client Relationship.  
Laws and Ethics of Advertising in India ASCI, Consumer protection and MRTP.  
Sales promotion : Tools, Impact, Advantages & Disadvantages  
Comparison of different promotion tools Guidelines for selecting appropriate tool and  
analysis of application of certain tools in select industries.  
Personal Selling : Role, Advantages & Disadvantages over other promotion tools

Publicity : Role of public and publicity. Publicity management  
Advertisement Vs sales promotion: Synergy & Trade-offs  
Consumer behavior : Scope , importance and interdisciplinary nature.  
The consumer research process , quantitative and qualitative research  
rational vs emotional buying motives. Dynamic nature of motivation.  
Role of personality in understanding consumer diversity. Product personality and brand  
personification . Self-image , vanity and consumer behavior .  
Consumer Perception : Absolute and differential threshold , subliminal perception.  
Perceptual selection , organization and interpretation.  
Positioning Perceived price, quality and risk . Manufacturer's image .  
Recognition and recall. Attitudinal and behavioral measures of brand loyalty.  
Cognitive dissonance theory and attribution theory .  
Design of persuasive communication .  
Influence of reference group – Friendship , work, Celebrity and family. Impact of social  
class, culture , subculture and cross – culture factors on consumer behavior .  
The process of opinion leadership and motivation behind opinion leadership. Diffusion  
and adoption process of innovations. Profile of consumer innovators.  
Consumer decision making process: Routinised response , limited and extensive problem  
solving behavior . Howard-Sheth, Engell, Kollat-blackwell and Nicosia models of  
consumer decision-making . Consumer gifting behavior . relationship marketing .  
Consumer Vis –a-Vis Industrial Buying Behaviour.

**Recommended Text Books**

S. No.	Author	Title	Publisher
1.	Schiffman & Kanuk	Consumer Behaviour	Pearson Education Asia
2.	Laudon & Bitta Nair	Consumer Behaviour Consumer Behaviour	Tala McGraw 3. Himalaya
	William Wells John Burneff Batra, Myers & Aaker	Advertising (Principles & practices)  Advertising Management	  Prentice Hall

**Reference Books**

S. No.	Author	Title	Publisher
1.	Engell, Kollat & Blackwell	Consumer Behaviour	Dryden Press
	Chunawalla & Rathor	Foundations of Advertising	Himalaya
	Sengupta	Brand Positioning	TataMcGraw

**PUNJAB TECHNICAL UNIVERSITY****SERVICES MARKETING (MB-603)**

**Max. Marks : 100**  
**External Assessment: 60**  
**Internal Assessment: 40**

Growth of service sector economy, Service Characteristics, Service Classification, Service Marketing Triangle, Service Marketing Mix, Quality Gaps Model. Consumer Behaviour in Services, Customer Expectation of Service, Customer Perception of Service. Understanding Customer expectation and Perception through Marketing Research.

Relationship Marketing - Concept, Benefits and Strategies.

Market Segmentation and Targeting.

Service recovery.

Service Development and Design: New Service Types, Supplementary Services, Developing Positioning Strategy,

Positioning Maps

Servicescape Types, Servicescape effects on behaviour

Importance and Strategies for effective delivery through Employees, Intermediaries and Customer Participation.

Managing Demand, Managing Capacity, Waiting Line Strategies

Services Marketing Communication Mix, Communication Strategies

Factors related to Pricing, Pricing approaches, Pricing Strategies

Service Quality and Productivity, Quality Gaps, Prescriptions for closing Quality Gaps, Customer Service Function.

Services Management Trinity, Interactional Conflicts, Internal Marketing

**Recommended Text Books**

<b>Sr.</b>	<b>Author</b>	<b>Books</b>	<b>Publisher</b>
1.	Zeithmal, Valarie A	Services Marketing	Tata McGraw Hill
2.	Lovelock, Christopher H.	Services Marketing	Pearson Education

**Reference Books**

<b>Sr.</b>	<b>Author</b>	<b>Books</b>	<b>Publisher</b>
1.	Verma H.V.	Marketing of Services	Prentice Hall
2.	Payne A.	The Essence of Service Marketing	
3.	Woodruff, Helen	Services Marketing	
4.	Kotler, Philips & Andreason	Marketing of Non-Profit Organizations	

**PRODUCT & BRAND MANAGEMENT (MB 604)**

**Max. Marks: 100**  
**External Assessment: 60**  
**Internal Assessment: 40**

Product Concepts: Product Mix concepts, Product Classification.

Product Planning: Marketing Plan, Portfolio Analysis, Market Potential and forecasting.  
Product Market Strategies.

Product Life Cycle: Product Life Cycle Stages and corresponding Strategies, Product Evaluation.

Product Positioning: Concept, Product Differentiation, Positioning Strategies, Preference Analysis, Benefit Segmentation.

New Products: New Product Categories, Organization for Product Management.

New Product Development Process: Concept Generation, Concept Screening, Concept Testing, Marketing Strategy Development, Product Development, Product Use Testing, Test Marketing & Product Launching.

Designing the Offer: Perceptual Mapping, Conjoint Analysis, Pricing  
the Offer: Price Elasticity of Demand, Costs, Pricing Strategies.

Concept of Product Testing. Test Marketing. Product Launch.

Branding Decisions: Branding Brand Name Brand Characteristics, Brand Strategy Decisions.

Brand Image, Brand Identity, Brand Personality. Brand Positioning and Repositioning, Brand

Equity Brand Building: Brand Building Process. Brand Licensing and Franchising.

Packaging and Labeling

Recommended Texts

Sr.	Author	Books
1	C.Merle Crawford	New Product Management
2	Donald Lehmann	Product Management
3	Subroto Sengupta	Brand Positioning

Suggesting Reference:

Sr.	Author	Books
1	William Moore	Product Planning & Management
2	Ries & Trout	Positioning: The Battle for your Mind
3	David A.Aaker	Managing Brand Equity
4.	Urban, Hauser, and Dholakia, N.	Essentials of New Product Management

**PUNJAB TECHNICAL UNIVERSITY**

**SALES, CHANNEL & LOGISTICS MANAGEMENT (MB-605)**

**Max. Marks – 100**

**External Assessment – 60**

**Internal Assessment-40**

Objectives of Sales Management, Selling process, Personal Selling objectives, Determining Sales Related Marketing Policies.

Basic types of sales organization structures: Relationship of sales department with other departments in the organization.

Managing Distribution Channels

Motivating Sales Personnel Compensating Sales Personnel, Sales Contests.

Controlling the Sales Force: - Setting Standards, Comparing Standards to Performance, Control, Sales Budget, Sales Quotas, Sales Territories.

Introduction to CRM & Relationship Marketing

Retailing : Location , In house branding Vs multi branding strategy; Issues & challenges

Merchandising :Multi branding Vs exclusive stores

Space management

Retail Chain management; Issues, challenges & Advantages

Role of Information technology & IT Decisions

Franchising : Issues, challenges, advantages & disadvantages

Guidelines for effective franchisee system

Introduction, concept & significance, functions, interface with production & marketing.

Logistics functions & cost physical distribution, transportation, inventory control, warehousing, packaging, material handling, order processing, location analysis.

Neglect of physical distribution function in India & its cost.

Logistics information system: need, components, design, role of information in Logistics.

Transportation modes, mode choice, inter-modal transport, containerization, routing.

Logistics organization.

International Logistics.

Introduction Supply chain management

Role of IT in logistics

**Books Recommended**

Sr	Author	Title	Publisher
1.	Manning & Reece	Selling Today	Pearson
2.	Bowersox Close & Hat Trick:	Logistics Management	
3.	Ballou .:	Basic Business Logistics	
4.	Stock & Lambert :	Strategic Business Logistics	
5.	Khanna:	Physical Distribution Management	
6.	Cundiff; Govoni & Still	Sales Management	Prentice Hall
7.	David Jobber & Geoff Lancaster	Selling & Sales Management	

**PUNJAB TECHNICAL UNIVERSITY**  
**INTERNATIONAL MARKETING (MB 606)**

**Max. Marks: 100**  
**External Assessment: 60**  
**Internal Assessment: 40**

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Meaning and scope of international marketing, difference between domestic and international marketing. Direction & composition of Indian exports.

International marketing tactics, reasons for entering export marketing and organisation of an export department.

International economic environment, world trade tariff and non-tariff restrictions, role of WTO and trading blocks, international monetary system.

SAARC, SAPIA & Trading pattern in South Asia.

Indian export and import policy export promotion organizations, export incentives.

The procedure and practices of processing of an export order, producing for exports, export quality control; export finance, shipment and procedures thereof.

Export documents, processing of an export order, organisation and structure of export and import houses.

The selection of export markets, planning of export marketing strategy-product, pricing, promotion, and distribution channel. International marketing research.

### Recommended Text Books

S.No	Author	Title	Edition	Publisher
1.	Keegan	Global Marketing Management	7 <sup>th</sup>	Pearson Education Asia
2.	Cherunilam	International Trade & Export Management	7 <sup>th</sup>	Himalaya

### Reference Books

S.No	Author	Title	Edition	Publisher
1.	Onkvisit & Shaw	International Marketing Analysis & Strategy	3 <sup>rd</sup>	Prentice Hall India
2.	Cherunilam	International Marketing	1 <sup>st</sup>	Himalaya
3.	Jain	International Marketing Management	3 <sup>rd</sup>	CBS
4.	Catebra	International Marketing	9 <sup>th</sup>	McGraw Hill

**PUNJAB TECHNICAL UNIVERSITY**  
**RURAL MARKETING (MB 607)**

**Max. Marks: 100**  
**External Assessment: 60**  
**Internal Assessment: 40**

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Rural Marketing: nature, definition, scope & importance in India. Size & structure of rural markets.

Factors influencing rural marketing: Socio-cultural factors, population, occupation, literacy level, land distribution & use, development programmes, infrastructure, communication media, credit availability, local requirements.

Rural Market Index: Thompson index.

Market strategies & tactics with reference to rural markets. Product marketing & service marketing in rural India: product planning, communication media & message, distribution

C channels, market research (with special reference to seeds, fertilizers, farm equipments, new techniques, agricultural output & other services.)

Marketing of consumables & durables.

Marketing of agricultural produce: regulated markets, cooperative marketing & processing societies.

Rural Industry: Marketing of rural industry, cottage industry, artisan products.

Problems in rural marketing. Consumer education & consumer movement in rural India.

Role of government & NGOs in rural marketing.

**Reference Books**

S.No	Author	Title	Edition	Publisher
1.	Krishnamacharyulu & Ramakrishnan	Rural Marketing – Text & Cases	1 <sup>st</sup>	Pearson Education Asia
2.	Samiudin & Rehman	Rural Marketing		National Publishing House
3.	Rajagopal	Indian Rural Marketing		Rawat Publishers
4.	Sukhpal Singh	Rural Marketing Management	1 <sup>st</sup>	Vikas

## PUNJAB TECHNICAL UNIVERSITY

### FINANCIAL SERVICES (MB-621)

Max. Marks : 100

Exeternal Assessment : 60

Internal Assessment : 40

**Financial Services - Meaning, types and their importance.**

**Merchant Banking - Origin and development of merchant banking in India scope, organisational aspects and importance of merchant bankers. Latest guidelines of SEBI w.r.t Merchant bankers.**

**Mutual funds and AMCs- concept, origin and growth of mutual funds, constitution & management of MFs - Sponsors, Trustees, AMCs, and custodians. Clasification of mutual fund**

**schemes, advantages and disadvantages in mutual fund schemes, NAV and pricing of mutual**

**fund units. State of mutual funds in India.**

**Leasing-concept and development of leasing, business difference between leasing & hire purchase, types of leasing business, advantages to lessor and lessee.**

**Factoring - development of factoring types & importance, procedural aspects in factoring, financial aspects, prospects of factoring in India.**

**Plastic Money — Concept and different forms of plastic money - credit and debit cards, pros and**

**cons. Credit process followed by credit card organisations. Factors affecting utilisation of plastic money in India.**

**Credit rating - the concept and objective of credit rating, various credit rating agencies in India**

**and International credit rating agencies, factors affecting credit rating & procedural aspects.**

**Venture capital - concepts and characteristics of venture capital, venture capital in India, guidelines for venture capital.**

**Call money market: introduction, meaning, participation, location, volume of call loans, call rates, recent developments.**

**Treasury bill market-introduction, 91 days, 182 days treasury bill market, Commercial bill**

**market - introduction, bills of exchange, size of rmarket, schemes, rates, factors behind**

**imderdevelopmentr Market for CPs and CDs : introduction, interest rate determination,**

**Discount market and market for financial guarantees.**

**Depository: Introduction, Concept, depository participants, functioning of depository systems,**

**demat, remat, process of switching over to depository systems, benefits, depository systems in**

**India, SEBI regulation.**

Recommended Text Books

Sr.	Author	Books	Publishers
1	E.Gordon & K. Natarajan	Financial Markets & Services	Himalaya Publishing House
2	Lalit K.Bansal	Merchant banking & Financial Services	Unistar Books Pvt. Ltd.

## Reference Books

Sr.	Author	Books	Publishers
1.	<b>Edited by Ravi Puliani, Mahesh Puliani</b>	<b>SEBI Manuals</b>	<b>Bharat Law House</b>
2.	<b>M.Y.Khan</b>	<b>Financial Services</b>	<b>Tata McGraw Hill</b>
3.	<b>H.R.Machiraju</b>	<b>Merchant banking – Principles &amp; Practices</b>	<b>New Age International Pvt. Ltd.</b>
4.	<b>L.M.Bhole</b>	<b>Financial Institutions &amp; Markets</b>	<b>Tata McGraw Hill</b>

**PUNJAB TECHNICAL UNIVERSITY**

SECURITY ANALYSIS &amp; PORTFOLIO MANAGEMENT (MB-622)

Max. Marks: 100  
 External Assessment : 60  
 Internal Assessment : 40

**Investment management: objective, investment opportunities., and philosophy of individual & institutional investors.**

**Fundamental analysis: concept & significance of economic analysis, industry analysis: introduction, need for industry analysis, alternative classification of industry, industry life cycle analysis, economic factors & industry analysis, SWOT analysis for industries.**

**Company analysis - nature and style of management, key role of financial analysis, ratio analysis.**

**Technical analysis - different techniques of analysis, DOW theory, volume indicators, market sentiment indicators, confidence indicators, points & figure charting, bar charting.**

**Efficient market theory random walk: weak form, semi-strong, strong form of market. Empirical tests. Comparison of random walk, technical & fundamental analysis.**

**Portfolio analysis selection: portfolio theory, return portfolio risk, efficient set of portfolios, optimum portfolio, capital asset pricing theory (CAPM), capital market line, security market line, corporate or folio management in India, portfolio revision techniques, constant value & constant ration plan, formula plan, dollar cost averaging.**

**Options & futures: concept of derivatives, option trading, option contracts settlement, pricing of option futures, concept of futures, characteristics of future contract, its types, difference between future, options, forwards & badla contracts.**

Recommended Text Books

S.No	Author	Title	Publisher
1.	Fischer & Jordon	Security Analysis & Portfolio Management	Prentice Hall India
2.	Robert Hauge	Modern Investment Theory	
3.	V.K. Bhalla	Investment Management: Security Analysis and Portfolio Management	S Chand

**PUNJAB TECHNICAL UNIVERSITY**

**MANAGEMENT OF BANKING & FINANCIAL INSTITUTIONS (MB-623)**

Max. Marks: 100  
External Assessment : 60  
Internal Assessment: 40

**Financial Institutions: Definition, Types, and Role of Financial Institution in Economic Development.**

**Commercial Banks: Evolution, Management and Organizational setup, Assets & Liabilities, Theories of Liquidity Management,, Management of Primary & Secondary Reserve, Management of Loans.**

**Reserve Bank of India: Organisation, Management, Role & functions., Credit Control.**

**Development Banks in India: Types, functions, growth, structure & working of development banks.**

**Mutual Funds: Evaluation, SEBI regulations, & different types of schemes. Deposit**

**Insurance: Concept & working of Deposit Insurance Introduction to DICGC**

**REFERENCE BOOKS:**

<b>R,M, Srivastva</b>	<b>: Management of financial Institution</b>
<b>Madhu Vij</b>	<b>: Management of Financial Institutions in India</b>
<b>R.N. Aggarwal</b>	<b>: Financial Liberalization in India</b>
<b>Machiraju</b>	<b>: Indian Financial System</b>
<b>LM. Bhole</b>	<b>: Financial Markets &amp; Institution</b>

**PUNJAB TECHNICAL UNIVERSITY****DIRECT TAX PLANNING (MB-624)**

Max. Marks: 100

External Assessment : 60

**Internal Assessment: 40**

Concepts of tax planning, tax evasion & tax avoidance, importance & scope of tax planning. Basic definitions under income tax act & determination of residential status.

**Individual Taxation: Computation of income under different heads of income & clubbing provisions. Set off and carry forward of losses. Deductions out of GTI. Rates of tax & computation of tax liability. Tax planning relating to individuals (in general) and tax planning relating to employee's remuneration. Exempted incomes.**

**Corporate Taxation: Computation of income under different heads of income, Set off and carry forward of losses, Deductions out of gross total income, Rates of tax, computation of tax liability and MAT provisions.**

**Introduction to TDS and payment of Advance Tax.**

**Tax planning relating to following areas: Ownership pattern, Location of Business, Nature of Business, Dividend policy, issue of bonus shares, inter corporate dividends, Amalgamation and merger of companies. Managerial decisions like make or buy, own or lease, close or continue, export or local sales, replace or repair, Foreign collaborations and joint ventures.**

**Double Taxation Avoidance Agreements.**

**Tax planning under Wealth Tax Law.**

## Recommended Text Books

Sr.	Author	Books	Publishers
1	Girish Ahuja & Ravi Gupta	a) Corporate Tax Planning & Management b) Systematic Guide to Income Tax	Bharat Law House Pvt. Ltd.
2	Dr. Vinod K. Singhania, Kapil Singhania, Monica Singhania	a) Direct Taxes Planning & Management b) Students Guide to Income Tax	Taxmann's Publication Pvt. Ltd.

## Reference Books

Sr.	Author	Books	Publishers
1	Bhagwati Prasad	Direct Taxes – Law & Practice	Wishwa
2	Dr. Vinod K. Singhania, Kapil Singhania, Monica Singhania	Direct Taxes – Law & Practice	Taxmann's Publication Pvt. Ltd.
3	R.N.Lakhotia, Subash Lakhotia	Corporate Tax Planning	Vision Books

**PUNJAB TECHNICAL UNIVERSITY****INTERNATIONAL FINANCE (MB-625)**

Max. Marks: 100  
 External Assessment: 60  
 Internal Assessment : 40

International Finance : concept & role of international finance manager in multinational corporations.

International Financial environment: international transactions & financial market, trade & capital flow, inflation, exchange control & currency devaluation, expropriation etc. Different types of risks: country risk analysis.

Foreign direct investment & foreign institutional investment foreign collaboration trends since liberalisation. Financial operations of multinational corporation: sources & investment: short, medium & long term national currency financing foreign currency financing, regional & national development finance, private investment companies, Multilateral financial institution : WB/IMF, ADB. Export & import financing: role of commercial banks. Basic instruments, private non-bank sources of finance.

Financial innovation & risk sharing: introduction, futures markets in growing world, financial future trading, role of financial futures, swap markets, basic swap structure, interest rate, fixed rates currency, currency coupon, types.

International stock exchanges: New York , London, Luxemburg, third world and Asian stock exchanges: working and their influences, the securities market, bond market, foreign portfolio investment.

developments in international finance: country funds, ADR, GDR, EURO issues, ECB's their process of issue, benefits, limitations & specific guidelines issued by FIPB.

International financial investment strategies and regulations for Indian Companies. FEMA.

## Recommended Text Books

Sr.	Author	Books	Publishers
1.	V.Sharan	International Financial Ma	Prentice Hall India
2	Maurice D.Levi	International Finance	McGraw Hill Inc

## Reference Books

Sr.	Author	Books	Publishers
1	Madhu Vij	International Finance	Excel Books
2	P.G.Apte	International Financial Management	Tata McGraw Hill
3	V.K.Bhalla	Management Text & Cases	Anmol Publications

**PUNJAB TECHNICAL UNIVERSITY****WORKING CAPITAL MANAGEMENT (MB-626)**

Max Marks:100  
External Assessment:60  
Internal Assessment:40

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Working Capital Management: Introduction, Concept of working Capital ;importance of working capital, factors influencing W.C. requirements, operating cycle and cash cycle, levels of working capital investment, optimal level of W.C. investments, Overall W. C. policy.

Planning of working capital investment: introduction, need, determinants, computation of working capital.

Financing and control of working capital-introduction, sources of finance including accruals, trade credit, W.C. Advance by commercial banks, regulation of bank finance, public deposits, ICDs, short-term loans from Fls, right debentures for W.C., commercial papers and factoring. W.C. & banking policy (Tandon, Chore, Marathe committee reports.)

Cash management system: introduction, motive for holding cash and marketable securities; factors determining the cash balance, the cash system; managing the cash flow; types of collection systems, mailed payment collection system, other collection systems, Cash concentration strategies; disbursement tools, investment in marketable securities; types of marketable securities.

Forecasting cash flows: introduction, methods of financial forecasting, forecasting daily cash flows, sources of uncertainty in cash forecasting, hedging cash balance uncertainties, hedging via interest rate, futures & options on futures.

Receivable management: introduction, objectives, costs, benefits, credit policies, evaluation of the credit applicant, credit terms, collections from accounts receivable.

Inventory management : introduction type of control required, cost of holding inventories, inventory control models, inventory control responsibility, other control devices, inventory management & evaluation.

**Recommended Text Books**

S. No	Author	Title	Publisher
1.	V. K. Bhalla	Working Capital Management (Text & Cases)	Anmol Publications

**Reference Books**

S. No	Author	Title	Publisher
1.	M.Y. Khan & P.K. Jain	Financial Management	Tata McGraw Hill
2.	James C. Van Horne	Financial Management & Policy	Person Education Asia
3.	Prasanna Chandra	Financial Management – Theory & Practice	Tata McGraw Hill

**PUNJAB TECHNICAL UNIVERSITY**

## MANAGEMENT CONTROL SYSTEM (MB-627)

**Max. Marks – 100**  
**External Assessment – 60**  
**Internal Assessment-40**

Management Control System : Basic concepts, nature and scope, Control environment Concept of goals and strategies. Behavioral considerations.

Responsibility Centers: Revenue and expense centers, Profit centers, Investment centers.

Transfer Pricing: Objectives and methods.

Budgeting: Budget preparation, Types of budgets. Behavioral aspects of budgets.

Variance analysis and reporting. Performance analysis and measurement. Impact on management compensation.

Modern control methods :JIT, TQM and DSS. Control in service organizations.

**Recommended Text Books**

<b>Sr.</b>	<b>Author</b>	<b>Books</b>	<b>Publishers</b>
1	Robert N.Anthony & Vijay Govindrajan	Management Control systems	Tata McGraw Hill

**Reference Books**

<b>Sr.</b>	<b>Author</b>	<b>Books</b>	<b>Publishers</b>
1	Joseph A. Maciariello/Calvin J.Kirbi	Management Control Systems	Prentice hall of India Pvt. Ltd.
2.	P.Saravanavel	Management Control Systems (Principles & Practice)	Himalaya Publishing House
3.	Kenneth A.Merchant	Modern Management Control Systems : Text & Cases	Pearson Education Asia
4.	Horngren, Foster, Datar	Cost Accounting	Prentice Hall India

**PUNJAB TECHNICAL UNIVERSITY****FINANCIAL ENGINEERING (MB-628)****Max. Marks – 100****External Assessment – 60****Internal Assessment-40**

Overview - Meaning, scope, tools used in financial engineering, difference between financial engineering and financial analysis.

Growth and Contributory factors to Growth of Financial Engineering

Skills and Knowledge Required:

Statistical, Modeling, Technology, Legal, Accounting and Taxation.

Conceptual Tools Required:

Time Value of Money, compounding, investment horizons, risk and types of risks, portfolio analysis, asset liability management, hedging, interest rate, yield curve, exchanges rates, speculation, arbitrage.

Physical Tools of the Financial Engineering:

Model for new product development: direction, design, testing

Debt market innovations, equity-related instruments, hybrid securities.

Processes and Strategies:

Asset-Liability Management, Risk Management Techniques, Restructuring and leveraged buy-out (LBO), tax-driven strategies, equity based strategies,

Future Trends:

Financial Engineering and Globalisation, Legal protection for innovative instruments:

Copy right, trade mark and competition law.

Books:

<b>Sr. No.</b>	<b>Autor</b>	<b>Title</b>	<b>Publisher</b>
1	John C.Hull	Options, Futures and Other Derivatives	Prentice Hall of Pvt. Ltd.
2	T.V.Somanathan	Derivatives	Tata McGraw Hill
3	Julian Walmsley	New Financial Instruments	PHI
4	John F.Marshall and Vipu K.Bansal	Financial Engineering	Prentice Hall of India Pvt. Ltd.
5	William F.Sharpe	Investments	Prentice Hall of Indian Pvt. Ltd.

**PUNJAB TECHNICAL UNIVERSITY****QUALITY MANAGEMENT (MB-641)****Max. Marks: 100****External Assessment: 60****Internal Assessment: 40**

Quality - Concepts, Role of Quality in Changing Business Conditions, Contributions of Deming, Juran, Philip Crosby, Kaizen, Trade off between Quality Costs and Schedules, Quality Costs and its Analysis, Life Cycle Costs, Difference between Inspection, Quality Control, Quality Assurance and Total Quality Management, Quality Problems and Causes, Pareto Analysis, Ishikawa Cause and Effect Diagnosis.

Quality Control - Control of Quality, Statistical Process Control, Control Charts, Acceptance Sampling.

Strategic Quality Management  
 Quality Management in Marketing  
 Quality Management in Designing  
 Quality Management in Manufacturing  
 Quality Management in Suppliers  
 Quality Management System

Total Quality Management - Concepts, Organization for Quality, Developing a Quality Culture.

Quality Certification - Quality Assurance, ISO 9000 Series Concepts and Procedure

**Recommended Texts:**

<b>Sr.</b>	<b>Author</b>	<b>Books</b>
1.	Juran, J.M. & Gryna, P.M.	Quality Planning & Analysis
2.	Logothetis, N.	Total Quality Control

**Suggesting**

<b>Sr.</b>	<b>Author</b>	<b>Books</b>
1.	Chandra	Quality Circles
2.	Bounds	Total Quality Management
3.	Eugene Grant	Statistical Quality Control

**PUNJAB TECHNICAL UNIVERSITY****PRODUCTION PLANNING & CONTROL (MB-642)****Max. Marks: 100****External Assessment: 60****Internal Assessment: 40**

Production Planning & Control: Importance, Objectives, Functions

Types of Production Systems.

Production Procedure: Production Cycle, Planning & Control in the Production Procedure.

Production Organization: Organization Structure, Sections of Planning & Control Department.

Product Selection, Process Selection, Plant Location, Plant Layout, Operations Capacity Planning.

Production Order: Process Charts, Production Master Programmes, Operation & Route Sheets, Breakdown of the Production Order & preparation of various Cards.

Production Planning: Operations Planning and Scheduling Systems, Aggregate Planning Process, Strategies for Aggregate Planning, Disaggregation of Aggregate Plans, Master Production Schedule (MPS), Material Requirement Planning (MRP), Rough Cut Capacity Planning.

Production Control: Machine Loading; Infinite and Finite Loading, Gantt Load Chart, Visual Load Profiles; Detailed Scheduling: Gantt Scheduling Chart, Forward and Backward Scheduling, Forms Schedules, Inputs of Schedule, Drawing a Job Schedule, Factors influencing Scheduling, Procedure Scheduling, Reducing Scheduling Problems; Dispatching; Expediting; recording Progress; Input / Output Control.

Production Control for Mass Production: Design of Production Line, Assembly Line Balancing.

Production Control for Batch production: Inventory Control for Single and Multiple Products, Line of Balance.

Production control for Job Shop Production: Jumbled Flow in a Job Shop, Job Sequencing for Machine Limited Scheduling Systems, Job Sequencing for Men and Machine Limited Scheduling Systems.

**Recommended Texts:**

<b>Sr.</b>	<b>Author</b>	<b>Book</b>
1.	L.N.Aggarwal & Parag Diwan	Management of Production System
2.	Adam & Ebert	Production & Operations Management
3.	Dilworth James B.	Production & Operations Management
4.	Eilon Samuel	Elements of Production Planning & Control
5.	N.G.Nair	Production and Operations Management

**Suggested References:**

<b>Sr.</b>	<b>Author</b>	<b>Books</b>
1.	P.John Collary Jr, Robbert D. Landel, Robert Fair	Production Operation Planning & Control
2.	Busbridge	Principles & Production Control

**PUNJAB TECHNICAL UNIVERSITY****INVENTORY MANAGEMENT (MB-643)**

Max. Marks : 100

External Assessment : 60

Internal Assessment : 40

Inventory: Concept, Inventory Classification, Functions of Inventory, Advantages and Disadvantages of Inventory.

Inventory Control: Objectives, Factors affecting Inventory, Control Policy, Inventory Costs, Material Requirement Planning (MRP), MRP Objectives & Methods, MRP System Components, Limitations and Advantages of MRP.

Factors affecting Stock levels, Maximum and Minimum Level, Order Point, Re-order Level, Perpetual Inventory System, Lead Time, Economic Order Quantity (EOQ), BASIC EOQ Model, Safety or Buffer Stock, Feedback Inventory Information System.

Selecting Inventory Control Techniques: ABC Analysis, HML Analysis VED Analysis, SDE, GOLF, FSN SOS XYZ Classification.

Just in Time (JIT)

Inventory Models: Static, Dynamic and Deterministic Models

Probabilistic Models: Determination of EOQ under various conditions of Demand and Lead-Time Analysis.

Stores Management: Store Objectives, Receiving Procedures and Control, Identification of Materials, Stores system and Procedures Classification and Codification, Standardisation, Storing of Materials, Stores Location and Layout, Preservation, Issue Control, Stores Documentation. Stock Valuation Methods and Stock Verification.

Material Handling : Choice of Equipments, Evaluation of Material Handling, Cost Reduction Methods.

Traffic : Transportation cost, Shipping terms, Model of transportation, Loss and damage of Freight Demurrage, Transportation Strategy and Cost Reduction.

Waste management : Sources of Surplus, Disposal of Surplus, Buying Surplus Material

**Recommended Texts:**

Sr.	Author	Books
1.	Gopal Krishan & Sandelya	Inventory Management
2.	Narasimhan. McLeavey, Billington	Production Planning & Inventory Control
3.	Dobler & Burt	Purchasing and Supply Management
4.	Adam & Ebert	Production and Operations Management
5.	L.N.Aggarwal & Parag Diwan	Management of Production System

**Recommended References:**

Sr.	Author	Books
1.	Buffa & Taubert	Production Inventory Systems : Planning & Control
2.	Marge J.F.	Production Planning & Inventory Control

**PUNJAB TECHNICAL UNIVERSITY**

**PURCHASING MANAGEMENT (MB-644)**

**Max. Marks: 100**  
**External Assessment: 60**  
**Internal Assessment: 40**

Role, Profit Centre Concept, Objectives

Make or Buy Decisions

Materials Planning

Materials Codification: Evolution of Codes, Classification, Methodology, Advantages

Standardization: Definition, Specification, Advantages, Techniques

Value Analysis: Concept, Organisation for Value Analysis, Application, Techniques,

Steps for Value Analysis

Spares Part Management: Inventory Problems, Inventory Control, Categorization,

Pricing Factors

Purchasing Functions, Relationship of Purchasing Department with other Departments,

Procurement, Supply Management Activities, Purchasing Objectives and Policies

Operating Procedures, Purchasing Cycles

Supply Sources: Importance of Source Selection, Vendor Development & Maintenance,

Vendor Rating, Competitive Bidding, Selecting the Source.

Pricing Principles: Economic Consideration in Determining the Right Price, Price Analysis,

Discounts.

Cost Analysis: Elements of Affecting Costs, Sources of Cost Data, Direct & Indirect Costs,

Target Costing.

Negotiation: Objectives, Process, Techniques, Price Negotiation

Contract Management.

Import Substitution

Public Buying

Traffic: Transportation Cost, Shipping Terms, Modes of Transportation, Loss and Damage of

Freight, Demurrage, Transportation Strategy and Cost reduction

**Recommended Texts:**

1. Dobler & Burt : Purchasing & Supply Management
2. P. Gopala Krishan : Purchasing & Materials Management

**References:**

1. L.N. Aggarwal & Parag Diwan : Management & Production Systems
2. N.G. Nair : Production & Operations Management

**PUNJAB TECHNICAL UNIVERSITY**

**TECHNOLOGY MANAGEMENT (MB-645)**

**Max. Marks: 100**  
**External Assessment: 60**  
**Internal Assessment: 40**

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Management of Technology: Various aspects and Issues, Strategic Considerations, Technological change and Innovation, Impact of Technological Change on Employment and Productivity, Social consequences.

Technology Forecasting, Technology Development, Acquisition and Transfer. Technology Absorption and Diffusion, Evaluation/Assessment of competing Technologies, Foreign Diffusion, Collaboration and Strategic Technological Alliances.

Law regarding protection of trade intellectual property rights, patents, trade marks; TRIPS and W.T.O. - its impact on Indian Economy.

Technological environment in India - Technology policy, role of various government, organisations such as DST, CSIR in development and dissemination of technology. Technology development at organisation level, role of information system, quality systems and market feedback.

**REFERENCES:**

- |                  |  |                      |
|------------------|--|----------------------|
| 1. Sharif Nawaz  | : Management of Technology Transfer and Technology | APCTT Bangalore.     |
| 2. Fredruck Betz | : Managing Technology,                             | Prentice Hall        |
| 3. Mauk Dugson   | : Technology Strategy and the Firm,                | Longman Publications |
| 4. UN-ESCAP      | : Technology for Development,                      | ESCAP Secretariat.   |

**PUNJAB TECHNICAL UNIVERSITY****MANUFACTURING POLICY & IMPLEMENTATION (MB-646)****Max. Marks: 100****External Assessment: 60****Internal Assessment: 40**

Production function: Production function & the organisation, Five Ps of production, Production Strategy, Planning & Controlling the Operations - Product Selection Linking the product with marketing, Planning the Operation, Setting up Production System, Controlling the Production.

Manufacturing System Design: Organisation of Manufacturing Operation, job batch and flow production methods; Group Technology - coding composite component, Product flow analysis, Group Technology and Just-In-Time.

Just-In-Time Manufacturing: JIT manufacturing, People Involvement, total Quality Control, Advantage of JIT Manufacturing, Elements that support JIT flow. The KANBAN System, Optimised Production Technology (OPT).

Manufacturing & Service Strategies: Manufacturing as a competitive advantage, Corporate Strategy & Manufacturing Strategy, Production Planning and Inventory Control in Manufacturing Strategy.

Theory of Constraints & Synchronous Manufacturing: Introduction, Theory of Constraints, The Goal of Performance Measures, Synchronous Manufacturing, Speed to Market, Bench Marking, Simultaneous Engineering, Reverse Engineering. Technology Audit, Strategic Alliances.

Technological Innovation in Manufacturing: Automated Design Support, Computer Aided Manufacturing (CAM), Flexible Manufacturing System (FMS), Computer Integrated Manufacturing (CIM). Artificial Intelligence (AI), Automation in Services.

**REFERENCES:**

- |                                    |   |
|------------------------------------|---|
| 1. Narasimhan Mcleavey, Billington | : Production Planning & Inventory Control |
| 2. James B. Dilworth               | : Production & Operations Management      |
| 3. Muchbevan Dekland & Lecky       | : Production & Operations Management      |

**PUNJAB TECHNICAL UNIVERSITY****ORGANISATION DEVELOPMENT (MB-661)**

Max. Marks: 100

**External Assessment: 60****Internal Assessment: 40**

Introduction to OD: Definitions & its distinguishing characteristics.

Historical background: various stages, second-generation OD and extent of application, values, assumptions and beliefs in OD.

Foundations of OD; Models and theories of planned change, Systems theory, Participation and empowerment, Teams and teamwork, Parallel learning structures, A normative-reductive strategy of changing, Applied behavioral science, Action research

Managing OD Process: Diagnosis, The Six-Box Model, Third Wave Consulting, Nature of OD intervention, Analysis of discrepancies, Phases of OD program, Model of Managing change, creating parallel learning structures.

Action Research and OD

Action research: a process and an approach

OD Interventions: An overview, team interventions, intergroup and third party peace making interventions, comprehensive interventions, structural interventions.

Training Experience: T-groups, Behavioral Modeling and Career anchors.

Issue in Consultant-Client Relations: Entry and contracting, defining the client system, trust, the nature of the consultant's expertise, diagnosis and appropriate interventions, depth of -" intervention, on being absorbed by the culture, the consultant as a model, the consultant team as a microcosm, the dependency issue and terminating the relationship, ethical standards in OD, implications of OD for the client.

Power, Politics and OD: Power defined and explored, theories about the sources of social power, Organisational politics defined and explored, the role of power and politics in the practice of OD.

Research on OD: Some issues and problems, Positive developments in research on OD.

The future of OD: Fundamental strengths of OD, OD's future: Leadership & value, Knowledge about OD, OD training, inter-disciplinary nature of OD, diffusion of technique, integration practice.

OD in Indian Organisations.

**Recommended Text Books**

<b>S.No</b>	<b>Author</b>	<b>Title</b>
1.	Richard Beckhard	Organisation Development Strategies & Models
2.	Wendell L. French	Organisation Development
	Cecil H. Bell	
3.	Blake, Robert & Mounon	Building a Dynamic Corporate through Grid OD
4.	Thomas H, Patten	Organisation Development through Team Building
5	Edgar F. Huse	Organisation Development & Change
6	Burke W.W.	Organisation Development principles & Practices
7	Sprucing up the organisation .Indian Management Vol. 36, Dec, 1997. <sup>1</sup>	

**PUNJAB TECHNICAL UNIVERSITY**

**TRAINING AND DEVELOPMENT (MB-662)**

Training and Development: Process and significance, Principles of Learning Identification of Training Needs, Evolving Training Policy.

Training and Development Systems, Training Methods, Training Centres, Role of External Agency in Training and Development, Training for Change, Resistance in Training, Developing Effective Trainers, Designing training Programmes.

Approaches to Management Development, Methods of Development, Designing Development Programmes, Team Building Exercises, Management Games

Evaluation of Training and Development, Criteria, Problems and Steps involved in Evaluation.

Emerging Issues in Training and Development in India.

Suggested Readings:

<b>Sr. No.</b>	<b>Autor</b>	<b>Title</b>	<b>Publisher</b>
1	Armstrong M.A.	Handbook of Human Resource Management Practice	Kogan Page, London
2	Dayal, I	Manpoer Training in Organisations	Prentice Hall of India, New Delhi
3	Craig, Robert	Training and Development Handbook	McGraw Hill, New York
4	Lynton, R.P and U.Pareek	Training and Development	Irwine Doresy, Howwood III

**PUNJAB TECHNICAL UNIVERSITY****ADVANCED INDUSTRIAL PSYCHOLOGY (MB-663)****Max. Marks: 100****External Assessment: 60****Internal Assessment: 40**

Introduction: Nature, Scope, and Problems & Objectives.

Individual Differences and their Evaluation, Role of Heredity, Environment, Types of Individual Differences.

Psychological tests in industries, their Utility, Reliability and Validity

Attitudes: Meaning, Characteristics, Factors that Influence Development of Attitudes, Implication for organization.

Industrial Morale : Meaning, Characteristics, Factors that Influence Morale, Measures of Improving Morale.

Monotony: Fatigue and Stress: Meaning, Impact, Causative Factors. Motivation:

Meaning, Types, Applications in industry - MBO, Job design.

Work Environment: The Arousal Hypothesis - Noise, Illumination, Color, Vibration, Miscellaneous Factors.

**Rewtamended Text Books**

<b>S.No</b>	<b>Author</b>	<b>Title</b>	<b>Publisher</b>
1.	M.L. Blum & J.C. Naylor	Industrial Psychology - Its Theoretical & Social Foundations	CBS
2.	Ghosh & Ghorpade	Industrial Psychology	Himalaya

**Reference Books**

<b>Sr</b>	<b>Author</b>	<b>Title</b>	<b>Publisher</b>
1.	Miner	Industrial/Organisation Psychology	TataMcGraw Hill
2.	Schultz & Schultz	Psychology & Work Today	Pearson
3.	Riggio	Industrial/ Organisational Psychology	Prentice Hall
4.	Dubrin	Applying Pschology: Industrial & Organisation Effectiveness	Prentice Hall

**PUNJAB TECHNICAL UNIVERSITY****INDUSTRIAL RELATIONS & LABOUR LAWS (MB –664)**

Max. Marks : 100

External Assessment : 60

Internal Assessment : 40

Industrial Relations – Concepts, Theories and Evolution.  
 Systems approach to IR-Actors, Context, Web of Rules & Ideology.  
 Trade unionism, Impact of trade unions on wages  
 Tripartite and bipartite bodies.  
 Anatomy of industrial disputes.  
 Conciliation, arbitration and adjudication.  
 Grievance Handling  
 Collective Bargaining : Concept , meaning & purpose  
 Approaches, techniques & strategies to Collective Bargaining  
 Process of Collective Bargaining  
 Impact of CB and workers participation in management on IR  
 Industrial relations in UK & USA, Japan & Russia  
 The Trade unions Act, 1926 { with amendments }  
 The Industrial Disputes Act, 1947 { with amendments }  
 Factories Act { with amendments }

**Reference:**

<b>Sr.</b>	<b>Author</b>	<b>Title</b>	<b>Publisher</b>
1.	Johan.T.Dunlop	Industrial System	
2.	Arun Monappa	Industrial Relations	Tata McGraw Hill
3.	Mamoria & Mamoria	Dynamic of Industrial Relations in India	Himalaya Publishing House
4.	Blain Pane	International Encyclopedia of Industrial Relations	
5.	Clark Kler	Labour & Management in Industrial Society	
6.	C.N.Patil	Collective Bargaining	University Press
7.	S.C.Srivastava	Industrial Relation & Labour Laws	
8.	Report of National Commission on Labour, 1969		

**PUNJAB TECHNICAL UNIVERSITY****SOCIAL SECURITY & LABOUR WELFARE (MB-665)**

The concept and scope of social security.

Social assistance and social insurance

Evolution of social security.

Law relating to social security

Payment of wages Act, 1936

Minimum Wages Act, 1948

Payment of Bonus Act, 1965

Workman's Compensation Act, 1923

Maternity Benefit Act 1961

Employees State Insurance Act, 1948

Provident Fund & Miscellaneous Provisions Act, 1951

Gratuity Act, 1972

I.L.O and social security

The concept of labour welfare : definition, scope and objectives, welfare work and social work.

Evolution of labour welfare, classification of welfare work, agencies for welfare work.

Welfare activities of govt. of India; welfare work by trade unions Labour Welfare work by voluntary social organizations.

Labour administration: agencies for administering labour welfare laws in India

<b>Sr.</b>	<b>Author</b>	<b>Title</b>	<b>Publishers</b>
1.	Hallen	Dynamic of Social Security	
2.	A.M.Sharma	Social Security & Labour Welfare	Himalaya Publishing House
3.	I.L.O.	Social Security	International Labour Office
4	T.N.Bhagoliwal	Economics of Labour & Social Welfare	
5.	B.D.Rawat	Labour Welfareism in India – Problems and Prospectus.	

**PUNJAB TECHNICAL UNIVERSITY****PERFORMANCE & COMPENSATION MANAGEMENT (MB-666)****Course Contents :**

Introduction to Compensation Management, Compensation Philosophies, Determination of inter and intra industry Compensation Differentials

Process of Compensation Management, Compensation and its components, Pay Structure, Internal Equity and External Equity in Compensation Systems, Compa Ratio

Concept and Process of Performance Management, Performance Appraisal, Potential Appraisal, Methods of Performance Appraisal, Performance Based Pay, Skills and Competency, Concept and Types of Incentive Systems.

Statutory Provisions governing different components of Reward System, Institutions related to Reward System: Wage Boards, Pay Commissions.

**Suggested Readings :**

<b>Sr.</b>	<b>Author</b>	<b>Title</b>	<b>Publisher</b>
1.	Richard Henderson	Compensation Management	Prentice Hall
2.	Armstrong, Michel and Murks Hellen	Reward Management – A Handbook of Salary Administration	Kogan Paul, London
3.	Bergess Lenard R	Wage and Salary Administration	Charles E Merrill, 1984, London
4.	Sud D.C.	Incentives Industry	Tata McGraw Hill

**PUNJAB TECHNICAL UNIVERSITY**

INTERNATIONAL HUMAN RESOURCE MANAGEMENT (MB 667)

**Max. Marks : 100**

**External Assessment : 60**

**Internal Assessment : 40**

Managing Human Resources in a foreign subsidiary : Cultural & behavioral differences in different countries, cross cultural studies of Hofstede, Kluckhohn & Stoodbeck; Ethical relativity versus ethical absolutism.

IHR planning & staffing: Practice & problems

Compensation Systems: Multinational compensation systems, factors affecting compensation systems.

Training & development: General practices, approaches & short-comings.

Appraising performance of subsidiary staff: Appraisal systems, acceptance & resistance.

Expatriates: Determination of needs, selection process, attributes contributing to success & failure, special issue of female expatriates, expatriate re-entry.

Accommodating & training of the family members: Education & vocational guidance, amenities & facilities.

1. Anne Will Harzing & J. V. Ruysevellt (editors) : Industrial Human Resources Management
2. Pieper R. : Human Resource management:  
An International Comparison Watter de Cruyter New York
3. Hofstede : Cultures Consequences
4. Gesteland : Cross-cultural Business Behavior. Viva
5. Harris&Moran : Managing Cultural Differences Gulf Publishing

**PUNJAB TECHNICAL UNIVERSITY**

PROGRAMMING in C / C++ (MB-681)

**Max. Marks : 100**

**External Assessment : 40**

**Internal Assessment : 40**

**Section A**

Problem solving with Computers: Algorithms and Flowcharts. Data types, constants, variables, operators, data input and output, assignment statements, conditional statements.

**Section B**

Iteration, arrays, strings processing, defining function, types of functions, function prototype, passing parameters, recursion.

Storage class specifiers, pre-processor, header files and standard functions.

**Section C**

Pointers: Definition and uses of pointers, pointer arithmetic, pointers and array, pointers and functions, pointer to pointer.

Structures, union, pointers to structures, user-defined data types, enumeration.

**Section D**

Evolution of OOP, OOP Paradigm, advantages of OOP, Comparison between functional programming and OOP Approach, characteristics of object oriented language – objects, classes, inheritance, reusability, user defined data types, polymorphism, overloading.

**Section E**

Classes, member functions, objects, arrays of class objects, pointers and classes, nested classes, constructors, destructors, inline member functions, static class member, friend functions, dynamic memory allocation.

Inheritance, single inheritance, types of base classes, types of derivations, multiple inheritance containers, member access control.

**Section F**

Function overloading, operator overloading, polymorphism, early binding, polymorphism with pointers, virtual functions, late binding, pure virtual functions, opening and closing of files, stream state member functions, binary file operations, structures and file operations, classes and file operations, random access file processing.

**References:**

<b>Sr.</b>	<b>Author</b>	<b>Books</b>	<b>Publisher</b>
1	Dietel & Dietel	C-How to Program	Pearson Education
2	Kerningham & Ritchie	The C Programming Language	
3	Kenetkar	Let us C	BPB
4	Lafore, Robert	C++	
5	Gottfried B	Theory and problems of programming in C	
6	Kanitkar	Understanding Pointers in C	
7	Chadha & Chadha	Data Structures in C	Kalyani

**PUNJAB TECHNICAL UNIVERSITY****RELATIONAL DATA BASE MANAGEMENT SYSTEM (MB-682)**

Max Marks : 100

Internal Assessment: 40

External Assessment: 60

**SECTION-A**

Overview of DBMS, Basic DBMS terminology, data independence. Architecture of DBMS, Distributed databases, structure of distributed databases, design of distributed databases, Introduction to - data mining, data warehousing

**SECTION-B**

Introduction to data models: entity relationship model, hierarchical model: from network to hierarchical, relational model, object oriented database, object relational database, comparison of OOD & ORD, comparison of network, hierarchical and relational models.

**SECTION-C**

Relational model: storage organizations for relations, relational algebra, relational calculus, functional dependencies, multivalued dependencies, and normalization.

**SECTION-D**

Relational query language: SQL, database integrity, security, concurrency, recovery, client/ server architecture, and technical introduction to oracle.

**References:**

<b>Sr.</b>	<b>Author</b>	<b>Title</b>	<b>Publisher</b>
1.	Desai	An Introduction to Database System	Galgotia
2.	Ullman & Widom	First course in Database Systems	Pearson Education
3.	Data	Introduction in Database System	
4.	Korth & Silbersollatz	Database System Concept	
5.	Bayros	Commercial Application Development using ORACLE Developer 2000	
6.	C.J.Data	An Introduction to Database Systems	Narosa publishers

- |     |                           |  |                  |
|-----|---------------------------|--|------------------|
| 7.  | Ullman                    | Principles of Database Systems                             | Galgotia         |
| 8.  | D.Kroenke                 | Database Processing  | Galgotia         |
| 9.  | Henry F.korth,<br>Abraham | Database System Concepts                                   | McGraw hill      |
| 10. | Naveen<br>Prakash         | Introduction to Database<br>Management                     | Tata McGraw Hill |
| 11. | Bobrowski                 | Client Server Architecture and<br>Introduction to Oracle 7 |                  |

**PUNJAB TECHNICAL UNIVERSITY****SOFTWARE ENGINEERING (MB-683)****Max Marks: 100****Internal Assessment: 40****External Assessment: 60****SECTION-A**

Software: Characteristics, Components Applications, Software Process Model: Waterfall, Spiral, Prototyping, Fourth Generation Techniques, Concepts of Project Management, Role of Metrics And Measurement.

**SECTION-B**

S/W Project Planning: Objectives, Decomposition Techniques: S/W Sizing, Problem Based Estimation, Process Based Estimation, Cost Estimation Models: COCOMO Model, The S/W equation, System Analysis: Principles of Structured Analysis, Requirement Analysis, DFD, Entity Relationship Diagram, Data Dictionary.

**SECTION - C**

S/W Design: Objectives, Principles, Concepts, Design Mythologies: Data Design, Architecture Design, Procedural Design, Object – Oriented Concepts.

**SECTION – D**

Testing Fundamentals: Objectives, Principles, Testability, Test Cases: White Box & black box Testing, Testing Strategies: Verification & Validation, Unit Test, Integration Testing, Validation Testing, System Testing.

**Reference:**

<b>Sr.</b>	<b>Author</b>	<b>Title</b>	<b>Publisher</b>
1.	Roger Pressman	Software Engineering“– A Practitioner’s Approach	McGraw Hill
2.	R.E.fairley	Software Engineering Concepts	McGraw Hill
3.	Jalota	An Integrated Approach to Software Engineering	Narosa Publishing House
4.	Elias M.Award	System Analysis and Design	

**PUNJAB TECHNICAL UNIVERSITY**

**ADVANCED DECISION SUPPORT SYSTEMS (MB-684)**

**Max, Marks: 100**

**External Assessment: 60**

**Internal Assessment: 40**

Decision-making: Concept, Process, Simon's model. Programmed versus non-programmed decisions, quantitative tools.

Decision models: Decision making under assumed certainty, risk & uncertainty.

Introduction to DSS: Characteristics and Objectives: Comparison with EDP/MIS.

Levels of Decision Support System: Specific, Generator and tools - Forecasting packages, Statistical packages; Relationship.

Role of Decision Support Systems and its application.

Components of Decision support Systems : Data Subsystem, Model Subsystem, and User-interface., DBMS, Quantitative models and modeling in DSS.

Group Decision support Systems, Expert system and its integration with DSS. Executive Support System.

Create Applications Using EXCEL

Data Warehousing: Concepts, database structure, getting data into the data warehouse. Data

Mining: Automated Analysis, constructing a data warehouse system.

**REFERENCES:**

1. Turban & Aronson : Decision Support System & Intelligent System
2. Micheal W. Davis : Applied Decision Support
3. R. Jaya Shanker : Decision Support Systems
4. Sprague and Watson : Decision Support Systems : Theory and Practice
5. J.L. Bennett : Building Decision Support Systems
6. Efrem G. Mallach : Decision Support & Data Warehouse System

**PUNJAB TECHNICAL UNIVERSITY**

**Introduction to Computer Networks (MB-685)**

**Max Marks: 100**

**Internal Assessment: 40**

**External Assessment: 60**

**Section A** : Network and Networking: Basic & overview; Network protocols and standards – OSI, TCP, IP, FTP, TELENET, AIM, WAP etc. Satellite Based Information Network.

**Section B:** Network Services: Electronic Mail, File Transfer, Teleconferencing, Computer-Mediated Conferencing, Facsimile Transmission, Tele Text, videotext, etc. ISDN and Intelligent Network Security.

**Section C:** Introduction to data communication, analog Vs Digital Communication, Band Width limitation, data rate of a channel, Error detection and correction; nature of errors, parity check, CRC, hamming code, Modulation; Multiplexing: SDM, FDM, TDM, STDM.

**Section D:** Introduction to computer networks and application; network hardware, network software, OSI reference model, TCP/IP model, network standardization, physical layer: circuit switching, packet switching, message switching, terminal handling, telephone system, modems, connections, transmission media.

**Section E:** Internet working, Network layer in Internet IP Protocol, IP Address, TCP/ IP Service Model, TCP Connection management.

Sr.	Author	Books	Publisher
1.	A.S.Tannenbaum	Computer Network	Prentice Hall
2	D.E.Cormer	Computer Networks and Internet	Addison Wesley
3	D.E.Cormer & D.L Stevens	Inter networking with TCP-IP Design, Implemenation and Internals, Vol-2	Prentice Hall
4	D.Bertsekas & R.Gallagar	Data networks	Prenntice Hall
5	W.R. Stevens	UNIX Network Programming	Prentice Hall

**PUNJAB TECHNICAL UNIVERSITY**

**E-COMMERCE & IT ENABLED SERVICE (MB-686)**

**Max Marks: 100**

**Internal Assessment: 40**

**External Assessment: 60**

**SECTION – A**

Internet Basics: What is internet. What Special About Internet?

Dial Up Connection/Direct Connection; Slip Or PPP

WWW: The Client Site, Server Site, Web Pages in HTML, Environment Variables, Difference Between HTML and DHTML, ECOM and Portals.

**SECTION – B**

Internet Internals: Transmission Control Protocol/ Internet Protocol (TCP/IP), FTP, HTTP, WAIS (Wide Area Information Service), TELNET, Internet Addressing, IP Address, Electronic Mail Address, URL, E-Mail Basic.

Domain Name System: Name for Machine, Flat Name Space, Hierarchical Names Internet Domain names, Domain Name Revolution.

**SECTION-C**

HTML (hypertext marking language)

Basic HTML and tags, Language description, usability, static creation of HTML web pages. Creating tables, forms and their advantages.

**SECTION-D**

ASP (Active Server Pages)

Introduction to ASP technology. How to create dynamic web pages. Understanding ASP objects model, processing data using session variables. What is the purpose of global asa file. Data base connectivity through ADO's.

**SECTION – E**

E-Business models, BPO, Electronic Business system, E-Business security, Introduction to CMM

Note: A team of two examiners will evaluate the Final Research Project. There will be one external and one internal examiner, each evaluating out of 100 marks. The institute will select and invite an external examiner for the evaluation.

**Reference :**

<b>Sr.</b>	<b>Author</b>	<b>Books</b>	<b>Publisher</b>
1	Ravi Kalkota	Frontiers of E-Commerce,	Addison Wesley
2	K.Bajaj & D.Nag	E-Commerce, The Cutting Edge of Business, Tata McGraw	Tata Mc Graw
3	Green Stein	Electronic Commerce	Tata Mc Graw
4	Pee Losuin & A Murphy	Electronic Commerce	Jaico Pub

**PUNJAB TECHNICAL UNIVERSITY**

**VISUAL PROGRAMMING (MB-687)**

**Max. Marks: 100**  
**External Assessment: 60**  
**Internal Assessment: 40**

Introduction to VB: Concept of VB projects, creating user interfaces with windows command controls, working with forms - loading, hiding, controlling one form from another, designing menu.

Variables, constraints, procedures, control flow statements, loops & iterations.

Advanced design features, working with collections, creating classes in a program, working with active data objects.

Basic ActiveX Controls: Textbox, list box, combo box, slider, rich textbox & dialog box controls.

Multiple Document Interface (MDI): Parent-child menu, objects & instances, DLL procedure - declaring & calling.

Creating Database Applications: Accessing Data with Data Control, ODBC, using SQL, Data-bound controls.

Communicating with other programs: Using ActiveX Server, creating ActiveX Client Applications.

Extending the capabilities of VB: Writing Internet applications with VB, using hyperlinks in VB application, embedding a script, forms & controls.

**References**

1. Evangelos Petroustos : Mastering VB 6.0
2. Evangelos Petroustos : Mastering Database Programming with VB  
6
- 3 Sybex Publication : Visual Basic 6 Complete
4. Me Bride P.K. : Programming in VB
5. Nathan Gurewich & Ori Gurewich : Teach Yourself VB 6.0