MASTER OF COMMERCE (COMPUTER APPLICATIONS)

REGULATIONS

ELIGIBILITY

Candidates seeking admission to the first year of the Master of Commerce with Computer Application Degree course shall possess

a) B. Com (CA) / B. Com Degree; Or

b) Any other UG degree with one subject as Accountancy.

DURATION OF THE COURSE

The course shall extend over a period of two years comprising of four semesters with two semesters in one academic year. There shall not be less than 90 working days for each semester. Examination shall be conducted at the end of every semester for the respective subjects.

OBJECTIVE OF THE COURSE

- To impart the knowledge and skills on various advanced concepts and its applications in the field of Commerce.

- To train the students in application of computer for carrying out various business operations.

- To impart the necessary skills and aptitude for successful entrepreneurship.

- To equip the students with recent business practices.

- To prepare the students to occupy the prominent positions in business, industries and related organizations.

SCHEME OF EXAMINATION

Subject Code	Subject	Hrs of Instruction	Exam Duration (Hrs)	Max Marks			Credit Points
				CA	CE	Total	
First Semester							
Part A							
15PCCM101	Core I: Cost and Management Accounting	6	3	25	75	100	5
15PCCM102	Core II: Marketing Management	5	3	25	75	100	4
15PCCM103	Core III: Global Business Environment	5	3	25	75	100	4
15PCCM104	Core IV: International Human Resource Management	5	3	25	75	100	4
15PCCM105	Core V: Computer Fundamentals and Programming in C++	5	3	25	75	100	4
15PCCMP101	Core Practical I: Programming in C++	2	3	40	60	100	2
Non - credit							
15PLS101	Career Competency Skills I	1					
	Total	**29**				**600**	**23**
Second Semester							
Part A							
15PCCM201	Core VI: Financial Management	6	3	25	75	100	5
15PCCM202	Core VII: Corporate Governance and Business Ethics	4	3	25	75	100	3
15PCCM203	Core VIII: Programming in VB .Net	5	3	25	75	100	4
	Elective I	5	3	25	75	100	4
15PCCMP201	Core Practical II: Programming in VB .Net	2	3	40	60	100	2
15PMACCI201	IDC I: Quantitative Techniques	5	3	25	75	100	4
Part B							
15PCCIT201	Internship Training *(100 % Internal Evaluation)*	-	-	100	-	100	1
15PVE201	Value Education: Human Rights	2	3	25	75	100	2

Subject Code	Subject	Hrs of Instruction	Exam Duration (Hrs)	Max Marks			Credit Points
				CA	CE	Total	
Non - credit							
15PLS201	Career Competency Skills II	1		-	-	-	-
	Total	**30**				**800**	**25**
Third Semester							
Part A							
15PCCM301	Core IX: Income Tax Planning	6	3	25	75	100	5
15PCCM302	Core X: Research Methodology	5	3	25	75	100	4
15PCCM303	Core XI: Services Marketing *(Self Study & 100% Internal Evaluation)*	-	3	100	-	100	3
15PCCM304	Core XII: Electronic and Mobile Commerce	5	3	25	75	100	4
	Elective II	5	3	25	75	100	4
15PCCMP301	Core Practical III: Web Programming - HTML	2	3	40	60	100	2
15PMACCI301	IDC II: Advanced Business Statistics	5	3	25	75	100	4
	Total	**28**				**700**	**26**
Fourth Semester							
Part A							
15PCCM401	Core XIII: Accounting for Services	6	3	25	75	100	5
15PCCM402	Core XIV: Investment Analysis and Portfolio Management	4	3	25	75	100	3
15PCCM403	Core XV: Indirect Taxes *(100% External Evaluation)*	4	3	-	100	100	3
15PCCM404	Core XVI: System Analysis and Design	5	3	25	75	100	4
15PCCPR401	Project & Viva Voce	-	-	50	150	200	5
Part B							
15PCCCA401	Commerce Aptitude *(Online Test)*	2	2	100	-	100	1
	Total	**21**				**700**	**21**
Grand Total						**2800**	**95**

ELECTIVE SUBJECTS

Every student has to choose one specialisation, which consist of two subjects spread over second and third semester. This specialisation, once so chosen by the student, will not be changed under any circumstances. The details of the specialisation along with prescribed subjects are given hereunder:

Semester II: Elective I

Subject Code	Specialisation	Subject
15PCCEL201	Bank Management	Indian Banking System
15PCCEL202	Corporate Management	Project Management

Semester III: Elective II

Subject Code	Specialisation	Subject
15PCCEL301	Bank Management	Risk Management in Banks
15PCCEL302	Corporate Management	Corporate Regulatory Framework

FOR COURSE COMPLETION

Every student shall be deemed to have completed the course if he/she also undergo the following subjects successfully.

- Inter Disciplinary Course (IDC) in II and III Semesters.
- Internship Training at the end of II semester.
- Human Rights as Value Education Course in II Semester.
- Chosen Elective in II and III Semesters.
- Self study course in III Semester.
- Project report at the end of IV semester.

TOTAL CREDIT DISTRIBUTION

Components	Subject	No. of Subjects	Maximum Marks	Total Marks	Credits
Part A	Core	16	100	1600	64
	Core Practical	3	100	300	6
	Elective	2	100	200	8
	Inter Disciplinary Course	2	100	200	8
	Project	1	200	200	5
Part B	Value Education	1	100	100	2
	Internship Training	1	100	100	1
	Online Test	1	100	100	1
	Total			**2800**	**95**

15PCCM101	CORE I: COST AND MANAGEMENT ACCOUNTING	SEMESTER - I

Total Hours: 50

Note: *Distribution of Marks: Problem 80% and Theory 20%.*

OBJECTIVES:
1. To equip the students to ascertain and control costs
2. To facilitate the students to arrive at rationale managerial decisions

CONTENTS

UNIT - I (10 Hours)

Cost Accounting and Management Accounting - Nature, Scope and Significance - Cost Accounting Vs. Management Accounting - Cost Sheet - Tenders and Quotations. Material - Stock Levels - EOQ - Methods of Pricing: FIFO, LIFO, Simple Average and Weighted Average.

UNIT - II (10 Hours)

Labour Cost and Control - Labour Turnover - Remuneration and Incentives - Time Rate System - Piece Rate System - Premium and Bonus Plans (Halsey and Rowan Plan only).

UNIT - III (10 Hours)

Overheads - Primary and Secondary Distribution of Overheads - Absorption of Overheads: Under Absorption - Over Absorption. Operating Costing (Transport Costing only).

UNIT - IV (10 Hours)

Analysis and Interpretation of Financial Statements - Techniques of Financial Statement Analysis - Comparative, Common Size Statements and Trend Analysis. Ratio Analysis - Significance - Liquidity, Turnover, Profitability and Solvency Ratios - Construction of Balance Sheet Using Ratios.

UNIT - V (10 Hours)

Cash Flow and Fund Flow Analysis - Marginal Costing - BEP Analysis - Applications of Marginal Costing: Key Factor, Make or Buy and Sales Mix Decisions.

TEXT BOOK:
1. *Reddy, T.S. and Hariprasad Reddy, Y.* 2014. **Cost and Management Accounting**. [Fourth Edition]. Margham Publications, Chennai.

REFERENCE BOOKS:

1. *Sharma, R.K. and Shasi, K. Gupta.* 2013. **Management Accounting**. [Seventh Edition]. Kalyani Publications, Ludhiana.
2. *Maheshwari, S.N.* 2013. **Cost and Management Accounting**. [Fourteenth Edition]. Sultan Chand & Sons, New Delhi.
3. *Jain, S.P and Narang, K.* 2014. **Cost and Management Accounting** [Fourteenth Edition]. Kalyani Publishers, Ludhiana.

15PCCM102	CORE II: MARKETING MANAGEMENT	SEMESTER - I

Total Hours: 50

OBJECTIVES:
1. To understand various marketing policies and strategies.
2. To provide insight into various marketing techniques.

CONTENTS

UNIT - I (10 Hours)

Marketing Management - Objectives - Functions - Characteristics - Functions of Marketing Executives - Qualities of Marketing Executives - Challenges to Marketing Management. Market Segmentation - Need - Importance - Bases of Segmentation.

UNIT - II (10 Hours)

Product Management - Types of Product - Product Line - Product Mix - Product Differentiation, Positioning and Repositioning - Product Life Cycle - New Product Development Process. Branding - Functions - Characteristics - Brand Valuation. Packaging - Kinds - Functions - Requisites of Good Package.

UNIT - III (10 Hours)

Consumer Behaviour - Buying Decision Process - Buying Process - Factors Influencing Consumer Behaviour. Buying Motives - Importance - Classification. Pricing - Objectives - Kinds - Factors affecting Pricing Decisions - Procedures for Price Determination - Pricing Policy and Strategy.

UNIT - IV (10 Hours)

Channel Management - Functions, Importance and Types of Marketing Channel - Determination of Channel Length - Decision Making for Channel Distribution - Factors affecting Choice of Distribution Channels - Electronic Channels. Supply Chain Management - Concept - Components. Logistics Management - Need - Types.

UNIT - V (10 Hours)

Promotion Management - Promotion Mix - Sales Promotion - Personal Selling - Advertising. Recent Trends in Marketing: Marketing of Services - Customer Relationship Management - International Marketing - Electronic Marketing - Network Marketing - Direct Marketing - Green Marketing.

TEXT BOOK:
1. *Pillai, R.S.N and Bagavathi, V.* 2014. **Marketing Management**. [First Edition]. S.Chand Co. Ltd., New Delhi.

REFERENCE BOOKS:

1. *Gupta, C.B. and Rajan Nair, N.* 2014. **Marketing Management**. [Thirteenth Edition]. Sultan Chand & Sons, New Delhi.

2. *Rajan Saxena*. 2014. **Marketing Management**. [Third Edition]. Tata McGraw-Hill Publishing Co. Ltd., New Delhi.

3. *Philip Kotler, Kevin Lane Keller, Abraham Koshy & Mithileshwar Jha.* 2014. **Marketing Management**. [Fourteenth Edition]. Pearson Education, New Delhi.

15PCCM103	CORE III: GLOBAL BUSINESS ENVIRONMENT	SEMESTER - I

Total Hours: 50

OBJECTIVES:
1. To understand the factors affecting business in the globalised era.
2. To gain knowledge on international sources of finance and its operations.

CONTENTS

UNIT - I   **(10 Hours)**

Global Business - Need - Drivers - Stages - Problems - International Orientations - International Business Decisions - Types. International Business Environment - Significance - Economic, Social, Cultural, Demographic, Political, Regulatory, Natural and Technological Environment.

UNIT - II   **(10 Hours)**

International Trading Environment - Trade Strategies - Free Trade - Protection - Commodity Agreements - Cartels - State Trading - Trade Blocs - Forms of Integration - European Union - NAFTA - Economic Integration of Developing Countries - South-south Cooperation - SAARC - SAPTA - GATT - WTO - TRIMs - TRIPs.

UNIT - III   **(10 Hours)**

Foreign Exchange Market - Functions - Types of Transactions - Methods of Payments - Determination of Exchange Rates - Exchange Control - Exchange Rate Systems - Exchange Rate Classifications - Convertibility of Rupee - Devaluation - Currency Exchange Risks - Management of Exchange Rate Risks - FEMA.

UNIT - IV   **(10 Hours)**

Balance of Payments (BOP) - Components - Disequilibrium - Correction of Disequilibrium - Financing of BOP Deficit. International Investment - Types - Theories - Significance - Factors Affecting International Investment - Limitations. Financing Services - Forfaiting - Export Credit Risk Insurance.

UNIT - V   **(10 Hours)**

International Economic Organisations - IMF - World Bank - IFC - ADB - UNCTAD - UNIDO - ITC. Foreign Trade Policy of India - Objectives - Strategy - Promotional Measures - EOUs - SEZs - FTZs - EXIM Bank - ECGC - Import Substitution - Foreign Trade (Development and Regulation) Act, 1992.

TEXT BOOK:
1. *Francis Cherunilam.* 2014. **International Business: Text and Cases**. [Fifth Edition]. PHI Learning Private Ltd., New Delhi.

REFERENCE BOOKS:

1. *Aswathappa, K*. 2014. **International Business**. [Third Edition]**.** Tata Mc Graw Hill Publishing Company Ltd., New Delhi.

2. *Anant, K.Sundaram*. 2014. **International Business Environment**. [Second Edition]**.** Prentice Hall of India, New Delhi.

3. *Bhalla, V.K. and Shiva Ramu, S*. 2013. **International Business**. [Second Edition]**.** Anmol Publishers, New Delhi.

15PCCM104	CORE IV: INTERNATIONAL HUMAN RESOURCE MANAGEMENT	SEMESTER - I

Total Hours: 50

OBJECTIVES:
1. To provide an exposure to human resource practices in organisations.
2. To provide knowledge on understanding and managing human resource in organizations.

CONTENTS

UNIT - I (10 Hours)

International Human Resource Management (IHRM) - Concept - Domestic Vs. IHRM. Organisational Structure - Nature, Approaches and Steps in Designing Organisational Structure - Organisational Learning. International HR Planning - Division of Labour - Types of International Human Resources - Issues in Supply of Human Resources.

UNIT - II (10 Hours)

Recruitment - Sources at Macro and Micro Level - Techniques. Selection - Expatriate System - Selection Techniques. Performance Management - Challenges - Areas of Appraisal - Organisational Role Expectations - Appraisal System - Problems - Measurement of Effective Appraisal System.

UNIT - III (10 Hours)

Training and Development - Need - Areas of Global Training. Compensation Management - Complexities - Objectives - Components - Factors Affecting International Compensation - Approaches.

UNIT - IV (10 Hours)

International Industrial Relations - Trade Unions - Collective Negations - Industrial Conflicts - Quality Circles and Participative Management - Shifts in IHRM and Industrial Relations.

UNIT - V (10 Hours)

International Strategic Human Resource Management - Peculiarities - Value Creation - Global Strategic Management Process - MNC's Business and HRM Strategies - Collaborative Strategies.

TEXT BOOK:
1. *Subba Rao, P.* 2014. **International Human Resource Management and Industrial Relations**. [First Edition]. Himalaya Publishing House, Mumbai.

REFERENCE BOOKS:

1. *Aswathappa, K. and Sadhna Dash.* 2013. **International Human Resource Management**. [Second Edition]. Tata McGraw Hill Publishing Co. Ltd., New Delhi.

2. *Rao, P. L.* 2013. **International Human Resource Management**. [First Edition]. Excel Books, New Delhi.

3. *Gupta, S.C.* 2013. **International Human Resource Management**. [Second Edition]. Macmillan Publishers India, New Delhi.

15PCCM105	CORE V: COMPUTER FUNDAMENTALS AND PROGRAMMING IN C++	SEMESTER- I

Total Hours: 50

OBJECTIVES:
1. To acquire knowledge on programming languages.
2. To give exposure to Object Oriented Programming concepts and Programming skills in C++.

CONTENTS

UNIT - I   **(10 Hours)**

Computer Software: Operating Systems - Utilities - Compilers and Interpreters - Word Processors - Spread Sheets - Presentation Graphics - Database Management Systems (DBMS). **Programming Languages:** Machine Languages - Assembly Languages - High Level Languages - Compilers and Interpreters - The Compilation Process. **Operating Systems:** Functions - Classification. **Computer Networks:** Overview - Communication Processors - Telecommunication Software - Types of Networks - Network Topologies - Network Protocols - Network Architecture. **Internet:** Special Features - Internet Access - Basics - Internet Protocols - Internet Addressing - The World Wide Web - WebPages and HTML - Web Browsers - Searching the Web.

UNIT - II   **(10 Hours)**

Principles of Object Oriented Programming (OOP): Basic Concepts - Benefits - Applications. **Beginning with C++:** Structure of C++ Program. **Tokens, Expressions and Control Structures**: Tokens - Keywords - Identifiers and Constants - Basic Data Types - User Defined Data Types - Derived Data Types - Symbolic Constants - Type Compatibility - Declaration of Variables - Dynamic Initialization of Variables - Reference Variables - Operators in C++ - Scope Resolution Operator - Member Dereferencing Operators - Memory Management Operators - Manipulators - Type Cast Operator - Expressions and their Types - Special Assignment Expressions - Implicit Conversions - Operator Overloading - Operator Precedence - Control Structures.

UNIT - III   **(10 Hours)**

Functions in C++: Function Prototyping - Call by Reference - Return by Reference - Inline Functions - Default Arguments - Const Arguments - Function Overloading - Friend and Virtual Functions - Math Library Functions. **Classes and Objects:** Specifying a Class - Defining Member Functions - A C++ Program with Class - Making an Outside Function Inline - Nesting of Member Functions - Private Member Functions - Arrays within a Class - Memory Allocation for objects - Static data members - Static member functions - Array of Objects - Objects as Function Arguments - Friendly functions - Returning objects - Cast Member Functions -

Pointers to members - Local Classes. **Constructors and Destructors:** Constructors - Parameterized Constructors - Multiple Constructors in a Class - Constructors with Default Arguments - Dynamic Initialization of Objects - Copy Constructors - Dynamic Constructors - Constructing Two - Dimensional Arrays - Const Objects - Destructors.

UNIT - IV (10 Hours)
Operator Overloading and Type Conversions: Defining operator overloading - Overloading Unary operators - Overloading Binary operators - Overloading Binary operators using Friends - Manipulation of Strings using operators - Rules for overloading operators - Type Conversion. **Inheritance: Extending Classes:** Introduction - Defining Derived Classes - Single Inheritance - Making a private member inheritable - Multilevel Inheritance - Multiple Inheritance - Hierarchical Inheritance - Hybrid Inheritance - Virtual Base Classes - Abstract Classes - Constructors in derived classes - Member Classes: Nesting of Classes.

UNIT - V (10 Hours)
Pointers, Virtual Functions and Polymorphism: Pointers - Pointers to Objects - this Pointer - Pointers to Derived Classes - Virtual Functions - Pure Virtual Functions. **Managing Console I/O Operations:** C++ Streams. **Working with Files:** Introduction - Classes for File Stream Operations - Opening and Closing a File - Detecting end-of-file - More about open(): File Modes - File Pointers and Their Manipulations - Sequential Input and Output Operations - Updating a File: Random Access - Error Handling During File Operations - Command-line Arguments.

TEXT BOOKS:
1. *Alexis Leon and Mathew's Leon*. 1998. **Fundamentals of Computer Science and Communication Engineering.** [First Edition]. Leon Tech World, Chennai.
2. *Balagurusamy, E. 2008.* **Object Oriented Programming with C++.** [Fourth Edition]**.** Tata McGraw-Hill, New Delhi.

REFERENCE BOOKS:
1. *Rajaraman, V.* 1996. **Fundamentals of Computers** [Second Edition]. Prentice Hall of India Pvt Ltd., New Delhi.
2. *Venugopal, K.R, Rajkumar and Ravishankar.T*. 2005. **Mastering C++.** [First Edition] Tata McGraw-Hill, New Delhi.
3. *Herbert Schildt.* 2003. **The Complete References C++.** [Fourth Edition]. Tata McGraw Hill Publishing Company, New Delhi.

15PCCMP101	**CORE PRACTICAL I:** **PROGRAMMING IN C++**	**SEMESTER- I**

LIST OF PRACTICAL:

1. Program for Classes and Objects.

2. Program for Inline Functions.

3. Program for Friend Functions.

4. Program for Function with Default Arguments.

5. Program for Virtual Functions.

6. Program for Parameterized Constructor.

7. Program for Constructor with Default Arguments.

8. Program for Function Overloading.

9. Program for Operator Overloading.

10. Program for Single Inheritance and Multiple Inheritance.

11. Program for Multilevel Inheritance.

12. Program for File Operations.

15PLS101	CAREER COMPETENCY SKILLS I	SEMESTER - I

Total Hours: 15

OBJECTIVE:

1. To enhance employability skills and to develop career competency

CONTENTS

UNIT - I   (3 Hours)

Solving Simultaneous Equations Faster - Number System: HCF, LCM - Decimals - Percentages - Averages.

UNIT - II   (3 Hours)

Powers and Roots - Problems on Trains - Problem on Ages - Boats and Streams.

UNIT - III   (3 Hours)

Calendar - Clocks - Pipes and Cisterns - Permutations and Combinations - Seating Arrangements.

UNIT - IV   (3 Hours)

Syllogism - Assertion and Reasons - Statements and Assumptions - Identifying Valid Inferences - Identifying Strong Arguments and Weak Arguments - Statements and Conclusions.

UNIT - V   (3 Hours)

Reading Comprehension - Self Introduction - News Paper Review - Book Review.

15PCCM201	CORE VI: FINANCIAL MANAGEMENT	SEMESTER - II

Total Hours: 50

Note*: Distribution of Marks: Problem 70% and Theory 30%.*

OBJECTIVES:
1. To acquaint knowledge on application of financial management techniques in business.
2. To develop skills in financial analysis and decision making.

CONTENTS

UNIT - I (10 Hours)

Financial Management - Evolution - Scope - Objectives - Process - Financial Decisions - Functional Areas of Financial Management - Functions of Chief Finance Officer - Sources of Finance.

UNIT - II (10 Hours)

Capital Budgeting - Need and Significance of Capital Budgeting - Types of Investment Decisions - Capital Budgeting Methods: Payback Period - Accounting Rate of Return - Net Present Value - Internal Rate of Return - Profitability Index.

UNIT - III (10 Hours)

Capital Structure - Theories of Capital Structure - Net Income Approach - Net Operating Income Approach - MM Approach. Cost of Capital - Determination of Cost of Capital - Cost of Debt, Preference Capital, Equity Capital and Retained Earnings - Computation of Weighted Cost of Capital.

UNIT - IV (10 Hours)

Working Capital Management - Concept - Kinds - Importance - Forecasting Working Capital Requirements - Management of Cash - Receivable Management - Inventory Management.

UNIT - V (10 Hours)

Leverages - Financial, Operating and Composite Leverages. Dividend Policy - Determinants of Dividend Policy - MM Hypothesis - Gordon Model - Walter Model.

TEXT BOOK:
1. *Sharma, R.K and Shasi, K. Gupta.* 2014. **Financial Management**. [Seventh Edition]. Kalyani Publications, Ludhiana.

REFERENCE BOOKS:

1. *Murthy, A.* 2014. **Financial Management**. [Second Edition]. Margham Publications, Chennai.

2. *Maheswari, S.N.* 2014. **Financial Management**. [Fourteenth Edition]. Sultan Chand & Sons, New Delhi.

3. *Pandey, I.M.* 2013. **Financial Management**. [Ninth Edition]. Vikas Publishing House Pvt. Ltd., Noida.

15PCCM202	CORE VII: CORPORATE GOVERNANCE AND BUSINESS ETHICS	SEMESTER - II

Total Hours: 50

OBJECTIVES:
1. To give an exposure to corporate governance practices in India.
2. To provide knowledge on role of stakeholders in corporate governance.

CONTENTS

UNIT - I (10 Hours)

Corporate Governance - Definitions - Requirements - Historical Perspective - Issues - Need - Importance - Benefits - Theories of Corporate Governance - Agency, Stewardship, Stakeholder and Sociological Theory. Corporate Governance Mechanism – Models: Anglo-American, German, Japanese and Indian Model - Code of Conduct for Good Corporate Governance.

UNIT - II (10 Hours)

Corporate Governance and Stakeholders - Rights and Privileges of Shareholders - Investors' Protection and Corporate Governance - Corporate Governance and Employees, Customers, Institutional Investors, Creditors, Community and Government.

UNIT - III (10 Hours)

Board of Directors and Corporate Governance - Role of the Board - Functions of Board for better Corporate Governance - Family-owned Business and Corporate Governance. Auditors and Corporate Governance - Role, Duties and Responsibilities of Auditors - Corporate Governance and Internal Auditors.

UNIT - IV (10 Hours)

SEBI and Corporate Governance - Primary and Secondary Market Reforms. Government and Corporate Governance - Forms of Government Regulations - Role of Governments in Limiting Corporate Power - Public Vs. Corporate Governance. Corporate Governance in India - Need - Initiatives - Brila Committee Report - Pioneers in Good Governance Practices - Corporate Governance Rating - Future of Corporate Governance in India.

UNIT - V (10 Hours)

Business Ethics and Corporate Governance - Benefits of Managing Ethics in Workplace - Characteristics of Ethical Organisation – Recognising Ethical Organisations - Role of Ethics in Corporate Governance. Bank and Corporate Governance - Need - Corporate Governance and World Bank - Basel Committee Norms - Elements of Corporate Governance Practices - Corporate Governance in Indian Banks.

TEXT BOOK:
1. *Fernando, A.C.* 2013. **Corporate Governance**. [Second Edition]. Pearson Education, New Delhi.

REFERENCE BOOKS:

1. *Sumeet Khurana.* 2013. **Corporate Governance**. [First Edition]. Dreamtech Press, New Delhi.

2. *Gupta C.B.* 2013. **Governance, Ethics and Social Responsibility of Business**. [First Edition]. Sultan Chand & Sons, New Delhi.

3. *Kesho Prasad*. 2012. **Corporate Governance** [Second Edition]. PHI Learning Private Limited, New Delhi.

15PCCM203	CORE VIII: PROGRAMMING IN VB .NET	SEMESTER - II

Total Hours: 50

OBJECTIVES:

1. To understand the fundamentals of VB.NET programming (variable, controls, loops, decision structures, etc.)
2. To develop skills for creating windows forms applications including Multiple Document Interface applications

CONTENTS

UNIT - I   (10 Hours)

Visual Basic .NET and .NET Framework: Common Type System - Common Language Specification - Common Language Runtime - Understanding Assemblies - .NET Security Model. Elements of Visual Basic .NET: Foundation, Naming and Notation, Variables, Constants, Operators - Decisions and Conditions - Loops.

UNIT - II   (10 Hours)

Methods: Method Data - Method Access Character - Properties. **Classes:** Class Characteristics - Inheritance and Polymorphism - Inheritance and Coupling - Multiple Inheritance. **Interfaces:** Implicit Interfaces - Explicit Interfaces - Arrays.

UNIT - III   (10 Hours)

Interfacing with the End User: Windows Forms - **MDI Applications:** Creating MDI Parent, Creating MDI Children, Arranging the Forms - Components and Controls - Menus and Toolbars - **Collecting User Input:** Buttons, Edit Textboxes, Check Boxes, Radio Buttons, Combo Boxes, List Box, Toolbars.

UNIT - IV   (10 Hours)

Exception Handling: Exception Handling Models - Recovering from Exceptions - Exception Statements. **Data Processing and I/O:** Data Processing - Working with Strings - Members of the String Class - Classic Visual Basic String Functions. Files and Directories.

UNIT - V   (10 Hours)

Data Access with ADO.NET: Databases - Accessing Data with the Server Explorer - Accessing Data with Data Adaptors and Datasets - Working with ADO.NET - Overview of ADO.NET objects. **Binding Controls to Databases:** Simple Binding - Complex Binding - Binding Data to Controls - Navigating in Datasets - Using the DisplayMember and ValueMember Properties - Creating Data Forms with the Data Form Wizard - Using SQL Parameters.

TEXT BOOKS:
1. *Jeffrey R. Shapiro*. 2002. **The Complete Reference Visual Basic .NET.** [Tata McGraw Hill Edition]. Tata McGraw Hill, New Delhi.
2. *Steven Holzner*. 2008. **Visual Basic .NET Programming BLACK BOOK**. [New Edition]. Dreamtech Press, New Delhi.

REFERENCE BOOKS:
1. *Anita C.Millspaugh* and *Julia Case Bradle*. 2003. **Programming in Visual Basic .NET.** [First Edition]. Tata McGraw Hill, New Delhi.
2. *George peck.* 2004. **Crystal Report 10: The Complete Reference.** [First Edition]. Tata McGraw Hill, New Delhi.
3. *Michael Halvorson*. 2003. **Microsoft Visual Basic.Net Step by Step.** [First Edition]. Prentice Hall of India Pvt. Ltd, New Delhi.
4. *NIIT*. **2005. Introduction to Visual Basic.NET**. [First Edition]. Prentice Hall of India Private Limited, New Delhi.

15PCCEL201	ELECTIVE I: INDIAN BANKING SYSTEM	SEMESTER - II

Total Hours: 50

OBJECTIVES:
1. To impart the knowledge on functions of banking.
2. To understand the banking regulations and procedures.

CONTENTS

UNIT - I   **(10 Hours)**
Banking - Origin - Functions of Banks - Classification of Banks - Unit Banking, Branch Banking and Mixed Banking - Role of Banks in Economic Development - Banking System.

UNIT - II   **(10 Hours)**
Central Banking - Nature - Functions - Methods of Credit Control - Reserve Bank of India - Functions - RBI and Agricultural Credit - RBI and Industrial Finance - RBI and the Bill Market Scheme - Financial Inclusion. State Bank of India - Origin - Functions - Role of SBI.

UNIT - III   **(10 Hours)**
Banker and Customer - Definition - General Relationship - Special Relationship - Statutory Obligation to Honour of Cheques - Banker's Lien - Secrecy Maintenance of Customers' Account. Opening of Different Types of Account in a Bank - Precautions - Special Types of Customers.

UNIT - IV   **(10 Hours)**
Negotiable Instruments - Meaning - Cheque, Bills of Exchange and Promissory Note - Crossing of Cheque - Endorsement - Types - Holder for Value - Holder in Due Course.

UNIT - V   **(10 Hours)**
Loans and Advances - Principles of Sound Lending - Forms of Advances - Secured and Unsecured Advances - Know Your Customer (KYC) Norms - Green Banking - Electronic Banking - Banking Ombudsman Scheme - Highlights of SERFAESI Act, 2002.

TEXT BOOK:
1. *Gordon, E. and Natarajan, K.* 2014. **Banking Theory, Law and Practice**. [Twenty-fourth Edition]. Himalaya Publishing House, Mumbai.

REFERENCE BOOKS:

1. *Natarajan, S. and Parameswaran, R.* 2014. **Banking Theory, Law and Practice**. [Second Edition]. S.Chand and Co. Ltd., New Delhi.

2. *Sundharam, K.P.M. and Varshney, P.N.* 2013. **Banking Theory, Law and Practice**. [Fourth Edition]. Sultan Chand & Sons, New Delhi.

3. *Maheswari, S.N.* 2012. **Banking Law and Practice**. [Fourth Edition]. Kalyani Publishers, Ludhiana.

15PCCEL202	**ELECTIVE I: PROJECT MANAGEMENT**	SEMESTER - II

Total Hours: 50

Note: Distribution of Marks - 100% Theory.

OBJECTIVES:
1. To impart knowledge on project identification and preparation
2. To understand the various risk elements involved in project execution.

CONTENTS

UNIT - I (10 Hours)

Generation of Project Ideas - Monitoring the Environment - Corporate Appraisal - Tools for Identifying Investment Opportunities: Porter Model and Life Cycle Approach - Scouting for Project Ideas - Preliminary Screening - Project Rating Index - Sources of Positive NPV - Qualities and Traits of a Successful Entrepreneur.

UNIT - II (10 Hours)

Market and Demand Analysis - Situational and Specification of Objectives - Collection of Secondary Information - Conduct of Market Survey - Market Characterisation - Demand Forecasting - Market Planning and Strategy.

UNIT - III (10 Hours)

Technical Analysis - Manufacturing Process - Technical Arrangements - Material Inputs and Utilities - Product Mix - Plant Capacity - Location and Site - Machineries and Equipment - Project Charts and Layouts - Project Implementation - Need for Project Alternatives. Financial Estimates and Projections - Project Cost - Means of Finance - Cost of Production - Profitability Projections.

UNIT - IV (10 Hours)

Project Selection - Firm and Market Risk - Social Decision Situations. Financing of Projects - Capital Structure - Menu of Financing - Equity and Preference Capital - Debentures - Term Loans - Working Capital Advances - Venture Capital - Project Financing Structures.

UNIT - V (10 Hours)

Project Implementation - Forms of Project Organisation - Project Planning - Project Control - Human aspects of Project Management - Pre-requisites for Project Implementation - Network Techniques for Project Management - PERT - CPM. Project Review - Control of in-progress Projects - Post Completion Audits - Abandonment Analysis - Agency Problem.

TEXT BOOK:

1. *Prasanna Chandra.* 2014. **Projects: Planning, Analysis, Financing, Implementation & Review**. [Sixth Edition]. Tata McGraw-Hill, New Delhi.

REFERENCE BOOKS:

1. *Chaudhury, S.* 2008. **Project Management.** [Second Edition]. Tata McGraw-Hill, New Delhi.

2. *Gopala Krishnan, P. and Rama Moorthy, V.E.* 2013. **Text Book of Project Management.** [Third Edition]. MacMillan India Ltd., New Delhi.

3. *Yen Yee Chang and Evelyn May Brown.* 2012. **Managing Project Risk.** [First Edition]. Prentice Hall, London.

15PCCMP201	**CORE PRACTICAL II: PROGRAMMING IN VB.NET**	**SEMESTER - II**

LIST OF PRACTICAL

1. Program to generate Fibonacci series and factorial number

2. Program to implement a Calculator with Memory and Recall operation.

3. Developing a text editor with Edit Options using VB.NET.

4. Developing an application to perform timer based quiz for five questions using VB.Net.

5. Develop an Application using File and Directory controls to implement a common dialog box

6. Develop an application using Data Grid to display the records in a table

7. Develop an application to the student details using ADO

8. Develop an application for Employee details using ADO.NET

9. Develop an application to the voter's information system using ADO.NET

10. Develop an application for Online Banking System

11. Develop an application for Online Railway Reservation System

12. Develop an application for Online shopping System.

15PMACCI201	IDC I: QUANTITATIVE TECHNIQUES	SEMESTER - II

Total Hours: 50

OBJECTIVE:
1. To learn the techniques for converting the industrial problems as mathematical models and solving them.

CONTENTS

UNIT - I   **(10 Hours)**
Quantitative Techniques - Concept - Need - Linear Programming Problem - Assumptions - Formulation of Linear Programming Problem - Problems and Solutions: Graphical Method - Simplex Method (Slack Variable only).
Chapter 2: 2.1 - 2.8. Chapter 3: 3.1.1 - 3.1.4.

UNIT - II   **(10 Hours)**
Transportation Problem : Initial Basic Feasible Solution - North West Corner Rule - Least Cost Method - Vogel's Approximation Method (VAM) - Optimum Solution - MODI Method.
Chapter 7: 7.1 - 7.5.

UNIT - III   **(10 Hours)**
Assignment Problem: Introduction and Definition - Balanced and Unbalanced Assignment Problems - Solution of Assignment Problems (Hungarian Method) - Problems.
Chapter 8: 8.1 - 8.7.

UNIT - IV   **(10 Hours)**
Sequencing Problem: Definition - Basic Assumptions - n jobs to be operated on two machines - Problems - n jobs to be operated on three machines - Problems - n jobs to be operated on m machines - Problems - Two jobs to be operated on m machines (Graphical Method) - Problems.
Chapter 14: 14.1 - 14.7.

UNIT- V   **(10 Hours)**
Network Analysis: Definition of Network - Event, Activity, Optimistic Time, Pessimistic Time, the Most Likely Time, Critical Path, Total Float and Free Float - Phases of Critical Path in PERT - Problems.
Chapter 15: 15.1 - 15.7.

TEXT BOOK:
1. *Sundaresan, V., Ganapathy, K.S., Subramanian and Ganesan, K.* 2002. **Resource Management Techniques**. AR Publishers, Arpakkam.

REFERENCE BOOKS:

1. *Vohra, N.D.* **Quantitative Techniques in management.** Tata McGraw Hill Publishing Company Ltd., New Delhi.
2. *Sanchethi, D.C. and Kapoor, V.K.* **Operations Research.** Sultan Chand and Sons. NewDelhi.
3. *Suranjan Saha, Rajagopal, D and Chatra Borthi.* **Quantitative Methods.** Tata McGraw Hill Publishing Company Ltd., New Delhi.
4. *Kothari, C.R.* **Quantitative Techniques in Management.** Vikash Publishing House Ltd., New Delhi.

15PVE201	VALUE EDUCATION: HUMAN RIGHTS	SEMESTER - II

Total Hours: 25

OBJECTIVE:
1. To make the students to understand the concepts of human rights.

CONTENTS

UNIT - I (5 Hours)

Human Rights: Definition - Historical Evolution - Classification of Rights - Universal Declaration of Human Rights - International Covenants on Economic and Social Rights - Constitutional Provision for Human Rights - Fundamental Rights - Directive Principles of the State Policy - Indian Constitution.

UNIT - II (5 Hours)

Civil and Political Rights: Right to Work - Right to Personal Freedom - Right to Freedom of Expression - Right to Property - Right to Education - Right to Equality - Right to Religion - Right to Form Associations and Unions - Right to Movement - Right to Family - Right to Contract - Right to Constitutional Remedies - Right to Vote and Contest in Elections - Right to Hold Public Offices - Right to Petition - Right to Information - Right to Criticise the Government - Right to Democratic Governance.

UNIT - III (5 Hours)

Economic Rights: Right to Work - Right to Adequate Wages - Right to Reasonable Hours of Work - Right to Fair Working Conditions - Right to Self Government in Industry - Customer Rights - Social and Cultural Rights - Right to Life - Right to Clean Environment.

UNIT - IV (5 Hours)

Women's Rights: Right to Inheritance - Right to Marriage - Divorce and Remarry - Right to Adoption - Right to Education - Right to Employment and Career Advancement - Rights Relating to Dowry - Right for Equality - Right for Safe Working Conditions - Children's Rights - Right to Protection and Care - Right to Education - Issues Related with Infanticide - Street Children - Child Labour - Bonded Labour - Refugees Rights - Minority Rights - Dalit Rights - Tribal Rights - Nomads Rights.

UNIT - V (5 Hours)

Human Rights Violation: International, National, Regional Level Organizations to Protect Human Rights - UNO - National Commission for Human Rights - State Commissions - Non Governmental Organizations and Human Rights - Amnesty Terrorism and Human Rights - Emergency and Human Rights - Judiciary and Human Rights - Media and Human Rights - Police and Human Rights.

REFERENCE BOOK:
1. *Paul Singh.* **Human Rights and Legal System.** Himalaya Publishing House, New Delhi.

15PLS201	CAREER COMPETENCY SKILLS II	SEMESTER - II

Total Hours: 15

OBJECTIVE:
1. To enhance employability skills and to develop career competency

CONTENTS

UNIT - I (3 Hours)

Assertiveness and Self Confidence - Career Opportunities - Industry Expectations (Skill set).

UNIT - II (3 Hours)

Campus to Corporate - Effective Communication.

UNIT - III (3 Hours)

Situational Dialogues /Role Play (Telephonic Skills) - Oral Presentations - Prepared - 'Just A Minute' Sessions (JAM).

UNIT - IV (3 Hours)

Body Language - Dress Code - Telephone Etiquettes - Email Etiquettes - Group Discussion - Creativity - Presentation Skills.

UNIT - V (3 Hours)

Interviewing Techniques - Do's and Don'ts of Interview - Mock Interview.

| **15PCCM301** | **CORE IX: INCOME TAX PLANNING** | **SEMESTER - III** |

Total Hours: 50

Note: Distribution of Marks: Problems 70% and Theory 30%.

OBJECTIVES:
1. To familiarize with various income tax provisions.
2. To guide in effective tax planning.

CONTENTS

UNIT - I   **(10 Hours)**
Income Tax - Basic Concepts - Previous Year - Assessment Year - Income Assessee - Person - Residential Status - Exempted Incomes.

UNIT - II   **(10 Hours)**
Salary - Basis of Charge - Allowances - Perquisites - Provident Fund - Profits in Lieu of Salary. Income from House Property - Determination of Annual Value - Allowable Deductions.

UNIT - III   **(10 Hours)**
Profits and Gains from Business or Profession - Expenses Allowed and Disallowed - Depreciation Allowance. Capital Gains - Types of Capital Assets - Transfer of Capital Assets - Short-term and Long-term Capital Gains - Exempted Capital Gains.

UNIT - IV   **(10 Hours)**
Income from Other Sources - Clubbing of Income - Set off and Carry Forward of Losses - Deductions from Gross Total Income.

UNIT - V   **(10 Hours)**
Tax Planning - Objectives - Importance - Essentials - Types - Areas of Tax Planning - Tax Avoidance - Tax Evasion.

TEXT BOOK:
1. *Gaur, V.P and Narang, D.B.* **Income Tax Law and Practice**. Kalyani Publishers, Ludhiana.

REFERENCE BOOKS:
1. *Singhania, V.K.* **Income Tax Law and Practice**. Taxmann Publications, New Delhi.
2. *Monoharan, T.N.* **Income Tax Law and Practice**. Snow White Publications, Mumbai.
3. *Reddy, T.S and Murthy, A.* **Income Tax Law and Practice**. Margham Publications, Chennai.

15PCCM302	CORE X: RESEARCH METHODOLOGY	SEMESTER - III

Total Hours: 50

OBJECTIVES:
1. To understand the elements of the research process.
2. To develop the skills in application of research techniques for solving business problems.

CONTENTS

UNIT - I (10 Hours)

Research - Meaning - Objectives - Types - Research Process - Significance - Research Methods Vs. Methodology - Scientific Method - Criteria for Good Research - Problems Encountered by the Researchers. Defining the Research Problem - Sources - Techniques Involved in Defining a Problem.

UNIT - II (10 Hours)

Research Design - Need - Features - Contents - Types - Factors affecting Research Design. Formulation of Hypothesis - Sources - Types - Procedure for Hypothesis Testing.

UNIT - III (10 Hours)

Sampling Design - Steps - Need - Criteria for Selection of Sampling Procedure - Characteristics of a Good Sample - Types of Sample Design. Measurement - Measurement Scales - Sources of Error in Measurement - Tests of Sound Measurement - Techniques of Developing Measurement Tools. Scaling - Scale Classification Bases - Important Scaling Techniques.

UNIT - IV (10 Hours)

Methods of Data Collection - Collection of Primary Data - Observation, Interview, Questionnaire and Schedules - Collection of Secondary Data - Case Study Method - Pre-testing and Pilot Study. Data Processing - Coding, Editing and Tabulation of Data. Conditions and Assumptions for Application of Parametric and Non-parametric Tests (Theory only).

UNIT - V (10 Hours)

Interpretation of Data - Need - Techniques - Precautions. Report Writing - Kinds of Reports - Steps in Report Writing - Layout of Research Report - Mechanics of Writing a Research Report - Precautions for Writing Research Report.

TEXT BOOK:
1. *Kothari, C.R. and Gaurav Garg.* 2014. **Research Methodology**. [Third Edition]. New Age International Publishers, New Delhi.

REFERENCE BOOKS:

1. *Panneerselvam, R.* 2014. **Research Methodology**. [Second Edition]. Prentice Hall of India Private Ltd., New Delhi.
2. *Krishnaswamy, O.R. and Ranganatham, M.* 2014. **Research Methodology for Social Sciences**. [Second Edition]. Himalaya Publishing House, Mumbai.
3. *Tripathi, P.C.* 2013. **Research Methodology in Social Sciences**. [Sixth Edition]**.** Sultan Chand & Sons, New Delhi.

15PCCM303	**CORE XI: SERVICES MARKETING** *(Self Study & 100% Internal Evaluation)*	**SEMESTER - III**

OBJECTIVES:
1. To impart the knowledge on various facets of services.
2. To understand the marketing practices followed in service sector.

CONTENTS

UNIT - I

Concept of Services - Comparison of Goods and Services - Service Marketing - Features - Need - Significance - Behaviour Profile of Users of Services - Role of Culture in Services - Technology in Services - Customer Protection in Services. Service Environment - Dimensions of Service Environment.

UNIT - II

Marketing Mix in Services Marketing - Product Mix - Promotion Mix - Price Mix - Place Mix - Process - Physical Evidence and Attractions - People. Management of Service Marketing - Capacity Planning and Scheduling - Internal and External Marketing - Interactive Marketing. Service Quality - Importance - Service Quality Gap - Reasons - Measurement - Gap Model of Service Quality.

UNIT - III

Bank Marketing - Concept - Justification for Practicing Marketing Principles - Importance of Segmentation to Banking Organisations - Marketing Mix for Banking Organisation. Insurance Marketing - Users of Insurance Services - Formulation of Marketing Mix for Insurance Organisations. Mutual Funds Marketing - Marketing Mix for Mutual Funds.

UNIT - IV

Education Marketing - Understanding the Behavioural Profile - Marketing Mix for Educational Services. Hospital Marketing - Rationale behind Practicing Marketing in Hospitals - Marketing Mix for Hospital Services. Hotel Marketing - Market Segmentation for Hotel - Formulating Marketing Mix for Hotel.

UNIT - V

Transport Marketing - Market Segmentation for Transportation - Marketing Mix for Railways, Road and Air Transportation. Mass Communication Marketing - Justification for Marketing of Mass Media - Marketing Mix for Communication Media. Retail Marketing - Market Segmentation for Retail Trading - Marketing Mix for Retail Services.

TEXT BOOK:

1. *Jha, S. M.* 2013. **Services Marketing**. [Seventh Edition]. Himalaya Publishing House, Mumbai.

REFERENCE BOOKS:

1. *Ravi Shanker*. 2012. **Services Marketing: Indian Experiences**. [First Edition]. Excel Books, New Delhi.

2. *Vasanthi Venugopal and Raghu, V.N.* 2013. **Services Marketing**. [First Edition]. Himalaya Publications, New Delhi.

3. *Sinha, P.K. and Sahoo, S.C.* 2014. **Services Marketing**. [First Edition]. Himalaya Publishing House, Mumbai.

15PCCM304	CORE XII: ELECTRONIC AND MOBILE COMMERCE	SEMESTER - III

Total Hours: 50

OBJECTIVES:

1. To obtain knowledge on Business Transactions through Information Technologies.
2. To know about security issues associated with the Business Transactions through Internet.

CONTENTS

UNIT - I (10 Hours)

Introduction to E-Commerce: Electronic Business - Categories of E-Commerce Applications - Global Trading Environment and Adoption of E-Commerce - Comparison between Traditional and Electronic Commerce - Advantages and Disadvantages of E-Commerce. **Business Models of E-Commerce:** Business Models of E-Commerce - Business to Consumer (B2C) - Business to Business (B2B) - Difference between B2C and B2B E-Commerce - Consumer to Consumer or Peer to Peer (C2C/P2P).

UNIT - II (10 Hours)

B2B E-Commerce and EDI: Introduction - Need for B2B - EDI Electronic Data Interchange - Paperless Transactions - EDI Standards - Data Standards used in EDI - Cost of EDI - Electronic Funds Transfer (EFT) - E-Marketing - Online Marketing and its Strategies. **E-Commerce: Technology:** IT Infrastructure - Internet - Middleware - Intranet - Extranet - VPN - Firewall - Cryptography - Digital Signature - Digital Envelope - Digital Certificates.

UNIT - III (10 Hours)

Mobile Commerce and WAP: Introduction to Mobile Commerce - Applications - Advantages - Wireless Application Protocol - WAP Browser - Enhanced features of WAP 2.0 - Underlying Technologies of M-Commerce - Architectures of Mobile Commerce. **Mobile Commerce - Risk, Security and Payment Methods:** Introduction - Security and Payment Methods - Mobile Commerce Security - Security Mechanisms.

UNIT - IV (10 Hours)

Mobile Commerce - Risk, Security and Payment Methods: Mobile Security - Network Infrastructure and Security - Wireless Local Area Network and Security - Wireless Wide Area Network and Security - WAP and Security - Mobile Commerce Payment Methods - Mobile Payment Standardization - Reputation and Trust - Applications and Risk Scenarios - Reputation Systems - The Trust Model - Future Trends. **Mobile Money - Infrastructure and Fraud Prevention for M-Payment:**

Introduction - Requirements for Authentication Infrastructure for M-Commerce - Various Trust Relationships.

UNIT - V   **(10 Hours)**

Mobile Money - Infrastructure and Fraud Prevention for M-Payment: Different Requirements for Mobile Commerce - Password-based Authentication for Mobile users with Support for Public Key Technology - M-Payment Value Chain - M-Payment Lifecycle - Operational Issues in M-Commerce Payment - Mobile Payment Systems or Solutions - General Analysis of the Payment Solutions - Fraud Management System in M-Commerce - Mobile Payments and Money Transfers. **Legal and Ethical Issues**: Issues Related to E-Commerce - Legal and Ethical Issues. **Cyber Laws:** Cyber Laws in India - Information Technology (IT) Act 2000. **Current Trends in Electronic Commerce:** Electronic Waste.

TEXT BOOK:

1. *Pandey, U.S. and Saurabh Shukla*. 2011**. E-Commerce and Mobile Commerce Technologies.** [Revised Edition 2010]. S.Chand & Company Limited, New Delhi.

REFERENCE BOOKS:

1. *Kamlesh, K. Bajaj and Debjani Nag. 2007.* **E-Commerce - The Cutting Edge of Business.** [Second Edition]. Tata McGraw Hill, New Delhi.
2. *Lei-da Chen and Gordon, W. Skelton.* 2005. **Mobile Commerce Application Development**. [Illustrated edition]. Cyber Tech Publishing, New Delhi.

15PCCEL301	ELECTIVE II: RISK MANAGEMENT IN BANKS	SEMESTER - III

Total Hours: 50

Note: Distribution of Marks: 100% Theory.

OBJECTIVES:
1. To understand the various types of risks in banking business.
2. To know the intricacies of risk management in banks.

CONTENTS

UNIT - I (10 Hours)

Risk Management in Banks - Need - Objectives - Types of Risks - Principles of Risk Management. Quantitative Risk Measurement - Importance - Indicators - Measuring Uncertainty - Sensitivity Analysis - Volatility - Downside Risk - Potential Risk.

UNIT - II (10 Hours)

Credit Risk Management - Need - Components - Techniques - Credit Risk Measurement and Potential Loss - Credit Risk Rating Framework - Credit Risk Models - Managing Credit Risk in Inter-bank and Off-Balance Sheet Exposures - Country Risk - Credit Audit.

UNIT - III (10 Hours)

Market Risk Management - Need - Architecture - Asset Liability Management System in Banks - Management of Liquidity, Interest Rate, Foreign Exchange, Equity Price and Commodity Price Risks - Measurement of Market Risk.

UNIT - IV (10 Hours)

Operational Risk Management - Need - Management - Prerequisites - Role of People - Fraud Risk Management. Solvency Risk - Capital Adequacy Framework - Capital Charge - Transitional Arrangements - Credit Risk Mitigation.

UNIT - V (10 Hours)

Payments and Settlement Systems Risk Management - Genesis - Risks for Users - Risk Management - Governance - Regulation. Risk Based Supervision of Banks - Objectives - Process - Bank Level Preparations - Risk Profiling Techniques - Risk Focused Internal Audit.

TEXT BOOK:

1. *Bhattacharya, K.M.* 2014. Risk Management in Indian Banks. [Third Edition]. Himalaya Publishing House, Mumbai.

REFERENCE BOOKS:

1. *Vaidyanathan. K.* 2013. Credit Risk Management for Indian Banks. [First Edition]. Sage Publications India Pvt Ltd., New Delhi.
2. *Dun and Bradstreet.* 2012. Financial Risk Management. [Fourth Edition]. McGraw Hill Education (India) Private Limited, New Delhi.
3. *Srivastava, R.M. and Divya Nigam.* 2013. Management of Indian Financial Institutions. Himalaya Publishing House, Mumbai.

15PCCEL302	ELECTIVE II: CORPORATE REGULATORY FRAMEWORK	SEMESTER - III

Total Hours: 50

OBJECTIVES:
1. To give an exposure to corporate laws practices in India.
2. To know the various intricacies of adherence to corporate laws

CONTENTS

UNIT - I   (10 Hours)
The Indian Companies Act, 2013: Company Directors - Appointment - Legal Position - Disqualification - Powers - Duties - Liabilities - Loans to Directors - Manager - Managerial Remuneration. Meetings - General Meetings of Shareholders - Requisites of a Valid Meeting - Proxies - Voting - Resolutions.

UNIT - II   (10 Hours)
Prevention of Oppression and Mismanagement - Books of Accounts - Statutory Books - Annual Accounts and Balance Sheet. Auditors - Appointment - Audit Committee - Rights, Powers and Duties - Special Audits - Audit of Cost Accounts. Compromises - Reconstruction and Amalgamation.

UNIT - III   (10 Hours)
Consumer Protection Act, 1986: Objectives - Consumer Protection Council - Consumer Disputes Redressal Agencies. Foreign Exchange Management Act, 1999: Regulations and Management of Foreign Exchange - Dealings in Foreign Exchange - Contravention and Penalties - Directorate of Enforcement.

UNIT - IV   (10 Hours)
The Information Technology Act, 2000: Definitions - Digital Signature - Electronic Governance - Attribution, Acknowledgement and Dispatch of Electronic Records - Secure Electronic Records and Digital Signatures - Regulation of Creating Authorities - Digital Signature Certificates - Penalties and Adjudication - The Cyber Regulations Appellate Tribunal - Offences.

UNIT - V   (10 Hours)
The Competition Act, 2002: Definitions - Prohibition of Certain Agreements, Abuse of Dominant Position and Regulation of Combinations - Competition Commission of India - Duties, Powers and Functions of Commission - Duties of Director General - Penalties - Competition Advocacy - Finance, Accounts and Audit.

TEXT BOOK:
1. *Kapoor, N.D.* 2013. **Elements of Mercantile Law.** [Thirty Second Edition]. Sultan Chand & Sons, New Delhi.

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REFERENCE BOOKS:

1. *Pillai, R.S.N and Bagavathi, V.* 2014. **Legal Aspects of Business**. [First Edition]. S.Chand Co. Ltd., New Delhi.

2. *Shukla, M.C.* 2010. **A Manual of Mercantile Law**. [Eight Edition]. S. Chand Co. Ltd., New Delhi.

3. *Kapoor, G.K.* 2012. **Corporate Laws**. [Second Edition]. Sultan Chand & Sons, New Delhi.

15PCCMP301	CORE PRACTICAL III: WEB PROGRAMMING - HTML	SEMESTER - III

Theory Part (Not for Written Examination, only for Practical)

CONTENTS

HTML Basics: Basic Page structure - Working with Text - Working with Links - Working with Images - Working with Multimedia.

REFERENCE BOOK:
1. *Wendy Willard.* 2009. **HTML - A Beginner's Guide**. [Fourth Edition]. Tata McGraw-Hill Education Private Ltd., New Delhi.

LIST OF PRACTICAL:

HTML (Hyper Text Markup Language)
1. Preparing a Resume of Your Own.
2. Creating a Web Page to Show the Information of a Departmental Store.
3. Creating a Style Sheet with Border Definition and Font Attributes.
4. Creating a Web Advertisement for Introducing a New Product to the Market.
5. Creating a Web Page for your Department using Font Effects, Filters and Linking within the page.
6. Creating a Website to Display the Profile of a Company.
7. Creating a Webpage to Display an Account Statement in a Bank.
8. Creating a Website for an Institution.
9. Creating a Website for E-Book.
10. Creating a Webpage for E-News Paper.
11. Inserting a Video Clipping in the Website.
12. Creating a Blog for Commerce Department.

15PMACCI301	IDC II: ADVANCED BUSINESS STATISTICS	SEMESTER - III

Total Hours: 50

OBJECTIVE:

1. To create knowledge of analyzing the data based on sample information and making interpretation about the population.

CONTENTS

UNIT - I   **(10 Hours)**

Statistics: Definition - Limitations and Uses - Diagrammatic and Graphical Representation of Data - Statistical Analysis - Measures of Central Tendency Mean - Median and Mode.

Book 1: Chapter 1: 1.3, 1.4. Chapter 2: 2.31, 2.5 - 2.9.

UNIT - II   **(10 Hours)**

Correlation: Types - Methods - Scatter Diagram - Karl Pearson's Correlation Co-efficient- Rank Correlation Co-efficient - Regression Analysis - Simple Regression Equations.

Book 1: Chapter 10: 10.1 - 10.3, 10.6 and 10.7. Chapter 7: 7.2, 7.3 and 8.2.

UNIT - III   **(10 Hours)**

Test of Significance - Population and Sample - Sampling Methods - Large Sample Tests and Small Sample *t*-tests - Problems.

Book 1: Chapter12: 12.1, 12.2, 12.9.1, 12.9.2, 12.13 and 12.14. Chapter 14: 14.2.9 and 14.2.10.

UNIT - IV   **(10 Hours)**

Testing of Significance - Parametric Tests - Chi-Square Test - Uses of Chi-Square Test - *F* Test – ANOVA - One Way Classification - Two Way Classification.

Book 1: Chapter: 13: 13.7.1 to 13.7.3, 14.5.5.
Book 2: Chapter 4: 4.3, 4.4.

UNIT - V   **(10 Hours)**

Multivariate Analysis - Partial Correlation, Multiple Correlation and Multiple Regression -Discriminant Analysis - Introduction - Factor Analysis - Terminologies - Centroid Method, Cluster Analysis (Concept only).

Book 1: Chapter 12: 12.7, 12.7.1, 12.8. Book 2: Chapter 11: 11.1, 11.2, 11.3, 11.4, 11.5, 11.5.1, 11.6, 11.6.1.

TEXT BOOKS:

1. *Kapoor,V.K and Gupta, S.C.* **Fundamentals of Mathematical Statistics.** *[Eleventh Edition].* Sultan Chand and Sons, New Delhi. (**UNIT I - V**)
2. *Panneerselvam,R.* 2010, **Research Methodology.** *PHI* Learning Private Limited, New Delhi. **(UNIT IV-V)**

REFERENCE BOOKS:

1. *Sancheti, D.C and Kapoor V.K. 2005.* **Statistics.***[Seventh Edition].* Sultan Chand and Sons, New Delhi.

2. *Kapoor,V.K and Gupta,S.P.* **Elements of Mathematical Statistics.** Sultan Chand and Sons, New Delhi.

15PCCM401	CORE XIII: ACCOUNTING FOR SERVICES	SEMESTER - IV

Total Hours: 50

OBJECTIVES:
1. To impart the knowledge on accounting practices followed in service sector.
2. To apply the accounting practices in services sector on real time basis.

CONTENTS

UNIT - I (10 Hours)

Accounts of Banking Companies - Calculation of Rebate on Bills Discounted - Accounting Treatment of Non-performing Assets - Preparation of Profit and Loss Account and Balance Sheet.

UNIT - II (10 Hours)

Accounts of Insurance Companies - Life Insurance - Calculation of True Life Assurance Fund - Valuation Balance Sheet - Revenue Account. Fire and Marine Insurance - Preparation of Revenue Account and Profit and Loss Account.

UNIT - III (10 Hours)

Accounting for Electricity Companies - Preparation of Revenue Account, Net Revenue Account, Receipts and Expenditure Account and General Balance Sheet.

UNIT - IV (10 Hours)

Hotel Accounting - Preparation of Profit or Loss Account and Balance Sheet. Social Accounting - Objectives - Approaches - Preparation of Social Income Statement and Social Balance Sheet. Accounting for Professionals: Accounting for Doctors and Solicitors.*

UNIT – V (10 Hours)

Accounting for Educational Institutions and Students Hostels - Preparation of Income and Expenditure Account and Balance Sheet. Accounting for Hospitals - Receipts and Payments Account, Income and Expenditure Account and Balance Sheet.*

TEXT BOOK:
1. *Jain, S.P and Narang, K.* 2014. **Advanced Accountancy Vol. I* & II** [Eighteenth Edition]. Kalyani Publishers, Ludhiana.

REFERENCE BOOKS:
1. *Reddy, T.S and Murthy, A*. 2014. **Corporate Accounting**. [Sixth Edition]. Margham Publications, Chennai.
2. *Gupta, R.L and Radhasamy, M.* 2013. **Advanced Accountancy - Volume II**. [Fourteenth Edition]. Sultan Chand & Sonsv, New Delhi.
3. *Shukla, M.C. and Grewal, T.S.* 2014. **Advanced Accountancy - Volume II**. [Seventh Edition]. S.Chand & Sons, New Delhi.

15PCCM402	CORE XIV: INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT	SEMESTER - IV

Total Hours: 50

Note: Distribution of Marks - 100% Theory.

OBJECTIVES:
1. To provide knowledge on investment avenues.
2. To facilitate construction of sound investment portfolio.

CONTENTS

UNIT - I (10 Hours)

Investment - Importance - Investment and Speculation - Investment and Gambling - Factors Favourable for Investment - Investment Media - Features of Investment Programme - Investment Process - Investment Alternatives - Alternative Forms of Investment. Financial System - Structure of Financial Markets - Financial Institutions.

UNIT - II (10 Hours)

Risk - Concept - Systematic Risk - Unsystematic Risk - Quantitative Analysis of Risk. Concept of Return - Measurement of Return. Security Valuation - Approaches to Investment - Valuation of Shares and Bonds.

UNIT - III (10 Hours)

Fundamental Analysis - Economic Analysis - Industry Analysis - Company Analysis. Technical Analysis - Assumptions - Dow Theory - Efficient Market Theory.

UNIT - IV (10 Hours)

Portfolio Analysis - Traditional Vs. Portfolio Analysis - Markowitz Theory - Sharpe Index Model. Techniques of Portfolio Revision - Formula Plans - Constant Rupee Value Plan - Ratio Plan - Modifications of Formula Plans - Capital Asset Pricing Model - Arbitrage Pricing Theory.

UNIT - V (10 Hours)

Portfolio Performance Evaluation - Performance Index of Sharpe, Treynor and Jensen. Derivatives - Options - Black Scholes Model - Forwards - Futures - Swaps - Buyback of Shares.

TEXT BOOKS:
1. *Preeti Singh.* 2014. **Investment Management**. [Eighteenth Edition]. Himalaya Publications, Mumbai.

REFERENCE BOOKS:

1. *Punithavathy Pandian*. 2013. **Security Analysis and Portfolio Management**. [Second Edition]. Vikas Publishing House Private Ltd., Mumbai.
2. *Bhalla, V.K.* 2013. **Investment Management**. [Fourth Edition]. Sultan Chand & Sons, New Delhi.
3. *Rustagi, R.P.* 2013. **Investment Management: Theory and Practice**. [Fourth Edition]. Sultan Chand & Sons, New Delhi.

15PCCM403	CORE XV: INDIRECT TAXES *(100% External Evaluation)*	SEMESTER - IV

Total Hours: 50

OBJECTIVES:

1. To provide the knowledge on provisions of Excise duty, Customs duty, CST and Service Tax.
2. To comprehend the tax related issues in business operations.

CONTENTS

UNIT - I (10 Hours)

Indian Federal System - Features and Schemes of Federal Finance - Finance Commission - Taxation - Canons - System - Classification of Tax - Features, Merits, Demerits and Difference of Direct and Indirect Taxes.

UNIT - II (10 Hours)

Excise Duty - Concept - Features - Types - Methods of Levy - Taxable Event - Methods of Valuation - Valuation Rules - Clearance of Goods - Assessment - Exemptions - Registration of Dealers - Provisions of CENVAT Credit - Powers and Duties of Excise Officers.

UNIT - III (10 Hours)

Customs Duty – Scope - Objectives - Types - Levy and Collection - Taxable Event - Valuation and Methods - Assessment - Prohibition - Exemptions - Import and Export Procedures - Duty Drawback Provisions - Functions and Powers of Customs Officers.

UNIT - IV (10 Hours)

Central Sales Tax (CST) - Objectives - Features - Inter and Intra-state Sale - Liability to Tax - Determination of Turnover - Assessment - Forms Under CST Act - Exemption - Registration - Input Tax Credit. Value Added Tax (VAT) - Features - Merits - Demerits - Assessment - Registration of Dealers.

UNIT - V (10 Hours)

Service Tax - Concept - Elements - Valuation - Taxable Services - Exempted Services and Persons - Registration - Payment - Offences and Penalties - Provisions of Service Tax Credit. Goods and Services Tax (GST) - Introduction in India - Need - Features - Advantages - Shortcomings - Current Status.

TEXT BOOK:

1. *Reddy, T.S. and Hari Prasad Reddy, Y.* 2014. **Business Taxation**. [Fifth Edition]. Margam Publications, Chennai.

REFERENCE BOOKS:

1. *Dinkar Pagare and Balachandran, V.* 2013. **Business Taxation**. [Eighth Edition]. Sulthan Chand & Sons. New Delhi.

2. *Datey, V.S.* 2011. **Indirect Taxes**. [Sixth Edition]. Taxmann Publications, New Delhi.

3. *Govindan, N.S.* 2012. **Indirect Taxes**. [First Edition]. C.Sitaraman and Co. Chennai.

15PCCM404	CORE XVI: SYSTEM ANALYSIS AND DESIGN	SEMESTER - IV

Total Hours: 50

OBJECTIVES:
1. To understand the concepts of System Analysis and Design.
2. To develop a Computer Based Information System.

CONTENTS

UNIT - I (10 Hours)

Introduction to Information System Development: Introduction to Information Systems Development: System Analysis and Design - Meaning - Business System Concepts - Categories of Information Systems - System Development Strategies - Tools for systems Development. **Managing the Application Development Portfolio:** How System Projects Are Begun - Managing Project Review and Selection - Preliminary Investigation - Selecting the Project Development Strategy.

UNIT - II (10 Hours)

Requirements Analysis and Determination: Tools for Determining Systems Requirement: Requirement Determination - Fact Finding Techniques - Tools for Documenting Procedures and Decisions. **Structured Analysis Development Strategy:** Structured Analysis - Features of Data Flow Strategy- Developing Data Flow Diagrams - Features of a Data Dictionary - Recording Data Descriptions.

UNIT - III (10 Hours)

Requirements Analysis and Determination: Computer - Aided Systems Tools: Roles of Tools in Systems Development - Categories of Automated Tools – Computer - Assisted Systems Engineering (CASE) Tools. **Systems Design: The Analysis-to-Design Transition:** Specifying Application Requirements - Objectives in Designing an Information System - Features to be designed - Managing the Design Process for Institutional Applications - Managing End-User Developed Systems. **Design of Computer Output:** How to Identify Computer Output needs - How to Present Information - Designing Printed Output - Designing Visual Display Output.

UNIT - IV (10 Hours)

System Design: Design of Input and Control: Concerns guiding Input design - Capturing Data for Input - Input Validation. **Design of Online Dialogue:** Online Systems Feature - Interface - Designing Dialogue - Dialogue Strategies - Data Entry Dialogues. **Design of Files and Use of Auxiliary Storage Devices:** Basic File Terminology - Data Structure Diagrams - Type of Files - Method of File Organization - Backup and Recovery of Files.

UNIT - V **(10 Hours)**

Implementation, Development Management, and Selection of Hardware and Software: System Engineering and Quality Assurance: Design Objectives - Program Structure Chart - Design of Software - Managing Quality Assurance - Managing Testing Practices. **Managing System Implementation:** Training - Conversion - Post Implementation Review. **Managing Information Systems Development:** Estimation and Management of Development time - Personnel and Development Management.

TEXT BOOK:

1. *James, A. Senn.* 1989*.* **Analysis and Design of Information Systems.** [Second Edition]. Mc Graw Hill Publication, New Delhi.

REFERENCE BOOKS:

1. *Jain, V.K.* 2000*.* **System Analysis and Design Hand Book**. [First Edition]. Dreamtech Press, New Delhi.
2. *Alan Dennis. Barbara Haley Wixom and Roberta, M.Roth.* 2006*.* **Systems Analysis Design.** [Third Edition]. Wiley India (P) Ltd., New Delhi.
3. *Gary, B. Shelly, Thomas, J. Cashman, Harry, J.Rosenblatt.* 1999*.* **Systems Analysis and Design**. [Third Edition]. Galgotia Publication Pvt. Ltd., New Delhi.

15PCCCA401	COMMERCE APTITUDE (*Online Test*)	SEMESTER - IV

Total Hours: 25

Note: *There shall be 100 Objective Type questions consist of 20 Questions from each unit.*

OBJECTIVES:
1. To impart knowledge on various commerce concepts.
2. To prepare the students to face commerce related competitive examinations.

CONTENTS

UNIT I (5 Hours)

Financial Accounting: Accounting Concepts and Conventions - Journal, Ledger and Trial Balance - Financial Statements. Partnership Accounts - Admission, Retirement, Death, Dissolution and Cash Distribution. Company Accounts - Issue and Forfeiture of Shares - Liquidation - Valuation of Shares – Amalgamation – Absorption - Reconstruction - Holding Company Accounts. **Cost and Management Accounting**: Ratio Analysis - Fund Flow and Cash Flow Analysis - Marginal Costing - Standard Costing - Budgetary Control.

UNIT II (5 Hours)

Financial Management: Capital Structure - Leverage - Cost of Capital - Capital Budgeting - Working Capital Management - Dividend Policy. **Income Tax:** Basic Concepts - Residential Status - Exempted Incomes - Computation of Taxable Income under Various Heads - Computation of Taxable Income of Individuals and Firms.

UNIT III (5 Hours)

Business Economics: Nature and Uses - Concept of Profit and Wealth Maximisation - Demand and Supply - Cost, Revenue, Price Determination in Different Market Situations - Perfect Competition - Monopolistic Competition, Monopoly, Oligopoly - Pricing Strategies. **Business Management**: Principles of Management - Planning - Organising - Staffing - Motivation - Leadership - Communication - Controlling - Corporate Governance and Business Ethics.

UNIT IV (5 Hours)

Marketing Management: Concepts of Marketing - Marketing Mix - Marketing Environment - Marketing Planning, Organising and Control - Consumer Behaviour - Market Segmentation - Product - Pricing - Physical Distribution - Promotion. **Human Resources Management**: Functions - Human Resource Planning - Recruitment and Selection - Training and Development - Compensation - Wage and Salary Administration - Incentive and Fringe Benefits - Performance Appraisal - Health, Safety, Welfare and Social Security - Workers' Participation in Management.

UNIT V (5 Hours)

Banking and Financial Institution: Importance of Banking - Types of Banks and their functions - RBI - NABARD - Rural Banking - Banking Sector Reforms - NPA - Capital Adequacy Norms - Development Banks - IDBI, IFCI, SFCs, SIDBI. **International Business:** Micro and Macro Environmental Factors - Balance of Payments - International Liquidity - International Economic Institutions - WTO, IMF, IFC, IDA and ADB - EXIM Bank - EXIM Policy of India - Regulation and Promotion of Foreign Trade.

GUIDELINES

1) ASSESSMENT OF THEORY SUBJECTS AND PRACTICAL

The Students shall be evaluated for 100 marks in each subject of study. (Theory and Practical) as detailed below:

Subject Nature	Theory	Practical
Continuous Assessment	25	40
Comprehensive Examination	75	60
Total	**100**	**100**

2) PASSING MINIMUM AND INTERNAL MARK DISTRIBUTION

(i) A. Theory

The candidate shall be declared to have passed the Examination, if the candidate secure not less than 50 marks put together out of 100 in the Comprehensive Examination in each Theory paper with a passing minimum of 38 marks in External out of 75. The components of Continuous Assessment for 25 Marks are as follows:

Components	Marks
Attendance	5
Assignment	5
Seminar	5
Internal Tests	10
Total	**25**

B. Theory (Internal Evaluation Only)

The candidate shall be declared to have passed the Examination, if the candidate secure not less than 50 marks out of 100 in the Comprehensive Examination (Internal Evaluation only). The components of Continuous Assessment for 100 Marks are as follows:

Components	Marks
Attendance	10
Assignment	20
Seminars	10
Internal Examinations	60
Total	**100**

(ii) Practical

The candidate shall be declared to have passed the Examination, if the candidate secure not less than 50 marks put together out of 100 in the Comprehensive Examination in each Practical paper with a passing minimum of 30 marks in External out of 60. The components of Continuous Assessment for 40 Marks are as follows:

Components	Marks
Experiments	10
Attendance	5
Record	5
Internal Examinations	20
Total	**40**

3) INTERNSHIP TRAINING

To gain practical exposure, the students shall undergo internship training in any institution in the field of accounting, auditing, banking, insurance, share trading, and other fields of relevance for a minimum period of TWO WEEKS at the end of the second semester (during summer vacation). The students shall submit a detailed internship training report along with the certificate from the concerned institution during the commencement of third semester. The marks for the internship training shall be awarded in the following manner:

Mode of Evaluation	Marks
Internship Report	50
Attendance	10
Viva Voce	40
Total	**100**

4) PROJECT WORK

- Every student shall undertake an independent project work in commerce based computer domain.
- Project work commences from III semester and submission of report and Viva voce examination is conducted at the end of IV semester.
- Every student shall submit the design of the project work at the end of III semester.
- Project work is subjected to three reviews at regular intervals. Two reviews are done by resource persons internally and one by externally.
- A candidate failing to secure the prescribed passing minimum in the project shall be required to re-submit the project with the necessary modifications.

The candidate shall be declared to have passed the Examination, if the candidate secure not less than 100 marks put together out of 200 in the Comprehensive Examination in each Project with a passing minimum of 75 marks in External out of 150. The marks for the project work shall be awarded in the following manner:

Components	CA	CE	Total
Attendance	10	-	10
Three Reviews	15	-	15
Project Report	25	100	125
Viva Voce	-	50	50
Total	**50**	**150**	**200**

5) METHODOLOGY OF ASSESSMENT - CAREER COMPETENCY SKILLS
Online Objective Examination (Multiple Choice Questions) - Semester I
- ➢ 100 questions - 100 minutes
- ➢ Twenty questions from each UNIT.
- ➢ Online examination will be conducted at the end of the I Semester.

Viva Voce - Semester II
- ➢ A Student has to come in proper dress code and he/she should bring 2 copies of Resume for the Viva Voce.
- ➢ A student may be asked to:
  - o Give Self Introduction
  - o Submit the resume to the examiner(s) and answer the questions based on it.
  - o Speak on any given topic for at least two minutes.
  - o Give a presentation for 10 minutes on a topic of their choice.
  - o Sit with other students in a Group for a Discussion.

6) QUESTION PAPER PATTERN AND MARK DISTRIBUTION

Theory

i) Question Paper Pattern and Mark Distribution **(For 75 Marks)**
1. **PART - A (5 x 5 = 25 Marks)**
   Answer ALL questions
   One question from each UNIT with Internal Choice

2. **PART - B (5 x 10 = 50 Marks)**
   Answer ALL questions
   One question from each UNIT with Internal Choice

ii) Question Paper Pattern and Mark Distribution **(For 100 Marks)**
1. **PART - A (5 x 5 = 25 Marks)**
   Answer ALL questions
   One question from each UNIT with Internal Choice

2. **PART - B (5 x 15 = 75 Marks)**
   Answer ALL questions
   One question from each UNIT with Internal Choice

Practical

Two practical exercises shall be asked **(2 x 30 = 60 Marks)**

External Mark Distribution (CE 60 Marks)

Components	Marks
Aims	5
Procedure	10
Writing the Source Code	15
Test & Debug the Source Code	15
Displaying the Output	10
Result Declaration	5
Total	**60**