

**D.R. BABASAHEB AMBEDKAR
MARATHWADA UNIVERSITY,
AURANGABAD.**



Revised Syllabus

of

BACHELOR OF COMPUTER APPLICATION

(B.C.A.)

Under the Faculty of Management Science

Semester – V & VI

[Effective from 2011-12 & onwards]

BACHELOR OF COMPUTER APPLICATION

(BCA) SYLLABUS

FIFTH SEMESTER

Paper No	Title	Weekly		Marks Theory	Marks Sessional or practical		Total Marks	Duration Theory Exam
		Th	Pr		S	Pr		
XXV	Management Accounting	4	-	60	40	-	100	2 Hrs
XXVI	Organisational Behaviour	4	-	60	40	-	100	2 Hrs
XXVII	Business Elective I	4	-	60	40	-	100	2 Hrs
XXVIII	RDBMS using ORACLE	2	4	60	-	40	100	2 Hrs
XXIX	V B	2	4	60	-	40	100	2 Hrs
XXX	I T Elective I	2	4	60	-	40	100	2 Hrs
	Total	18	12	360	120	120	600	--

SIXTH SEMESTER

Paper No	Title	Weekly		Marks Theory	Marks Sessional or Practical		Total Marks	Duration Theory Exam
		Th	Pr		S	Pr		
XXXI	Business Law III	4	-	60	40	-	100	2 Hrs
XXXII	Business Elective II	4	-	60	40	-	100	2 Hrs
XXXIII	Elements of Commercial Portals	4	-	60	40	-	100	2 Hrs
XXXIV	System Programming	4	-	60	40	-	100	2 Hrs
XXXV	I T Elective II	2	4	60	-	40	100	2 Hrs
XXXVI	Project	-	8	-	-	100	100	--
	Total	18	12	300	160	140	600	--

**BCA V Semester
XXVII - Business Elective I
(Choose any One Elective)**

E-1 Banking and Insurance

E-2 Retail Management

E-3 Entrepreneurship Development

**BCA VI Semester
XXXII - Business Elective II
(Choose any One Elective)**

E-1 Services Marketing

E-2 Hospitality Management

E-3 Export Management

IT Elective I

1. Software Engineering
2. Internet Programming
3. Advanced Networking

IT Elective II

1. Software Testing and Quality Assurance
2. Linux Administration
3. Mobile Computing

DETAILED SYLLABUS
FOR
BCA V SEMESTER

PAPER No: XXV: MANAGEMENT ACCOUNTING

Theory Marks: 60
Sessional Marks: 40

UNIT I

Definition, Objectives, Scope and Functions of Management Accounting, Management Accounting and Financial Accounting, Advantages & Limitations of Management Accounting

UNIT II

Analysis and Interpretation of Financial Statement

UNIT III

Funds Flow Analysis- Nature, Importance, Advantages of Fund Flow Analysis-Techniques used for construction of Funds Flow Statement (Simple Illustrations)

UNIT IV

Cash Flow Analysis- Nature, Importance, Advantages of Fund Flow Analysis-Techniques used for construction of Funds Flow Statement (Simple Illustrations)

UNIT V

Ratio Analysis – Nature of Ratio Analysis – Significance – Calculation of Ratios-Liquid Ratio-Fixed Assets-Turnover Ratio – Operating Ratio, Stock Turnover Ratio, Debtors Turnover Ratio, Creditors Turnovers Ratio, Debt Equity Ratio

Suggested Readings:

1. Management Accounting : Khan, M. Y. & Jain, P.K.
2. Management Accounting : Maheshwari, S. N.
3. Management Accounting : Sharma, R. K.
4. Management Accounting, M.E. Thukaram Rao, New Age International
5. Management Accounting, Khan & Jain, TMH
6. Cost Accounting-An Introduction, Nigam & Jain, PHI
7. Management Accounting, Pande, VIKAS

Sessional Work: Marks 40

	Marks
1. Attendance	10
2. Two Class Test of 5 Marks each	10
3. Tutorials /Assignment	10
4. Seminar on any Topic	05
5. Group Discussion on any Topic	05

PAPER NO. XXVI: ORGANISATIONAL BEHAVIOUR

THEORY : 60 Marks

SESSIONAL : 40 Marks

UNIT I

Definition and meaning of organizational behavior, role and importance of organizational behavior, OB Model.

UNIT II

Nature of personality, Theories of personality: type theory, Trait theory, Psychoanalytic theory, Social learning theory, Maslow's self actualization theory, Concept of Learning, Theories of Learning.

UNIT III

Perception and factors influencing perception, Concept of Motivation , Motivation Theories and principles

UNIT IV

Attitude and components of attitude, Formation of attitude, Work related Attitude, values, Terminal and instrumental values, Organizational values, Impact of attitude and values of individual on his performance.

Books Recommended

1. Robbins S.R; Judge.T.A; Sanghi.S., "Organizational Behaviour", 13th Edition, Pearson Education ,2009.
2. Luthans F. "Organizational Behaviour". 7th Edition, Mcgraw Hill .
3. Aswathappa, K. " Organizational Behaviour", 9th Edition, Himalaya Publishing House.

Sessional Work: Marks 40

Marks

- | | |
|-----------------------------------|----|
| 1. Attendance | 10 |
| 2. Two Class Test of 5 Marks each | 10 |
| 3. Tutorials /Assignment | 10 |
| 4. Seminar on any Topic | 05 |
| 5. Group Discussion on any Topic | 05 |

XXVII -BCA V Semester: Business Elective I**E-1: BANKING AND INSURANCE**

Theory Marks: 60
Sessional Marks: 40

Objective: Business needs fund for establishment, growth and development. Simultaneously every business bears a certain amount of risk and operates under uncertainties. In this context Banking and Insurance facilitate the business operation. This module has been designed to acquaint the learners with various services provided by Banking and Insurance to the business sector.

Unit 1: Banking

- Meaning and role of Bank, Type of Banks, Functions of a Commercial Bank

Unit 2: Bank Deposit Account

- Bank deposit accounts – Type, Opening and operating of Saving Bank Account

Unit 3: Negotiable Instruments

- Meaning and importance, Types - Hundis, Bills of Exchange, Promissory Note, Cheque

Unit 4: Insurance

- Concept and importance of Insurance, Principles of Insurance, Growth & Development of Indian Insurance Industry – Regulations of Insurance Business and The Emerging Scenario – Introduction to Life & General Insurance – Life Insurance: Features of Life Insurance – Essentials of Life Insurance Contract – Kinds of Insurance Policies – Premium determination – Life Policy Conditions.

Suggested Readings

1. Sundhram, K. P. M., Banking Theory Law and Practice, Sultan Chand & Co. Ltd., New Delhi.
2. Read, E. W., Commercial Bank Management, Harper and Row Publishers, New York
3. Varshney, P.N., Banking Law and Practice, Sultan Chand & Sons, New Delhi.
4. Seth, Marketing of Banking Services, Macmillan India Ltd., New Delhi.
5. Nigam, B. M. Lal, Banking Law & Practice, Konark, New Delhi

Sessional Work: Marks 40**Marks**

- | | |
|-----------------------------------|----|
| 6. Attendance | 10 |
| 7. Two Class Test of 5 Marks each | 10 |
| 8. Tutorials /Assignment | 10 |
| 9. Seminar on any Topic | 05 |
| 10. Group Discussion on any Topic | 05 |

XXVII -BCA V Semester : Business Elective I

E-2: RETAIL MANAGEMENT

Theory Marks: 60
Sessional Marks: 40

Objective: This course presents the basics of retailing, trends in retailing, evolution of retailing and global retail markets. This course enables students to learn the basics in retailing, evolution and trends in retailing.

UNIT I

Retail: Meaning – Functions and special characteristics of a Retailer – Reasons for studying. Retailing – Marketing-Retailer Equation – Marketing concepts applied to retailing – Retailing as a career – Trends in Retailing.

UNIT II

Retail Model and Theories of Retail Development – Life cycle and phase in growth of retail markets – Business models in retail – other Retail models.

UNIT III

Strategic Planning in Retailing: Situation Analysis – Objectives – Need for identifying consumer needs – Overall strategy, feedback and control – consumer decision-making process.

UNIT IV

Retail in India: Evolution and Size of retail in India – Drivers of retail change in India – Foreign Direct Investment in retail – Challenges to retail developments in India.

UNIT V

Global retail markets: Strategic planning process for global retailing – Challenges facing global retailers – Challenges and Threats in global retailing – Factors affecting the success of a global retailing strategy – U.S. retailers and foreign markets – Foreign retailers and U.S.markets.

Suggested Readings

1. Swapna Pradhan – Retailing Management – Text and Cases, Tata McGraw Hill – 2nd edition, 2004
2. Barry Berman and Joel R Evans – Retailing Management – A Strategic Approach, Prentice Hall of India, 8th Edition, 2002.
3. James R. Ogden, Denise Ogden – Integrated, Retail Management – Biztantra 2005
4. Gibson G Vedamani – Retail Management – Functional Principles and Prectice, Jaico Publishing House, Second edition, 2004.

Sessional Work: Marks 40

Marks

- | | |
|-----------------------------------|----|
| 1. Attendance | 10 |
| 2. Two Class Test of 5 Marks each | 10 |
| 3. Tutorials /Assignment | 10 |
| 4. Seminar on any Topic | 05 |
| 5. Group Discussion on any Topic | 05 |

XXVII -BCA V Semester: Business Elective I

E-3: ENTREPRENEURSHIP DEVELOPMENT

Theory Marks: 60
Sessional Marks: 40

Objective: To Explain Development Of Entrepreneurs.

UNIT I

Entrepreneur - meaning- importance-Qualities, nature, types, traits, culture, similarities and Economic and differences between Entrepreneur and Intrapreneur. Entrepreneurship development-its importance- Role of Entrepreneurship -Entrepreneurial environment.

UNIT II

Evolution of Entrepreneurs - Entrepreneurial promotion. Training and developing motivation : Factors - mobility of Entrepreneurs - Entrepreneurial change - occupational mobility-factors in mobility - Role of consultancy organizations in promoting Entrepreneurs-Forms of business for Entrepreneurs.

UNIT III

Creating and starting the venture - Steps for starting a small industry - selection of types of organization - International entrepreneurship opportunities.

UNIT IV

Managing, growing and ending the new venture - Preparing for the new venture launch – early management decisions Managing early growth of the new venture- new venture expansion strategies and issues - Going public - ending the venture.

UNIT V

Entrepreneurship Development and Government: Role of Central Government and State Government in promoting Entrepreneurship - Introduction to various incentives, subsidies and grants - Export Oriented Units - Fiscal and Tax concessions available. Women Entrepreneurs Reasons for low / no women Entrepreneurs their Role, Problems and Prospects

Suggested Readings

1. Vasanth Desai " Dynamics of Entrepreneurial Development and Management Himalaya Publishing House.
2. N.P.Srinivasan & G.P.Gupta," Entrepreneurial Development ", Sultanchand & Sons.
3. P.Saravanelu "Entrepreneurship Development ",Eskapee Publications.
4. Satish Taneja, Entrepreneur Development ", New Venture Creation.
5. Robert D.Hisrich, Michael P.Peters, " Entrepreneurship Development, Tata McGraw Hill

Sessional Work: Marks 40

Marks

- | | |
|-----------------------------------|----|
| 1. Attendance | 10 |
| 2. Two Class Test of 5 Marks each | 10 |
| 3. Tutorials /Assignment | 10 |
| 4. Seminar on any Topic | 05 |
| 5. Group Discussion on any Topic | 05 |

XXVIII - RDBMS USING ORACLE

THEORY 60

PRACTICAL 40

- Database Systems – Application and Purpose, View of Data, Database Languages, Relational Databases, Database Design, Object-Based and Semi-Structured Databases, Data Storage and Querying, Database Architecture, Database Users and Administrators, History of Database Systems.
- Data Models, Schemas and Instances.
- Relational Model – Structure of Relational Databases, Fundamental Relational Algebra Operations.
- SQL – Introduction, Data Definition, Basic Structure of SQL Queries, Set Operations, Aggregate Functions, Null Values, Nested Sub queries, Complex Queries, Views, Modification of Database, Joined Relations.
- Advanced SQL – Data Types and Schemas, Integrity Constraints, Authorization, Functions and Procedures, Recursive Queries.

PRACTICAL:

- Writing and executing queries to implement SQL concepts of DDL, DML, TCL, joins, procedures, functions, sub queries and views.

REFERENCE:

1. Abraham Siberschatz, Henry F. Korth, S. Sudarshan, “Database System Concepts”, McGraw Hill.
2. Ramez Elmasri, Shamkant B. Navathe, “Fundamentals of Database Systems”, Pearson Education.

XXIX - V B

THEORY 60

PRACTICAL 40

- Introduction – Installing Visual Basic, First Application, Toolbox, Property Editor, VB Forms, buttons, Events, Adding Code, Dealing with Errors, Project Explorer, Saving and Reopening Applications.
- Controls Explained – Controls and Methods, Using Buttons, Labels, Text Boxes, Picture Boxes, Check Boxes, Option Buttons, Frames, Lines and Shapes, Images, List Boxes, FlexGrids, Common Dialog Control, Combo Boxes, Timers, OLE Control, Setting Tab Order.
- Basics – Variables and Scope, Data Types, Using If...Then...Else, For...Next, Do...Loop, Case...Else, With...End With, MsgBox, InputBox, API, Printing.
- VB Tools – Menus, Toolbars, Code Editor, ActiveX Controls, Reference Manager, Project Templates.
- Databases – Introduction to Databases, Visual Data Manager, Designing Table, Adding Data, Adding Records, Deleting Records, Viewing Records, Searching Records, Showing Records in Grid, Copying Record to Clipboard.
- VB and Internet – Basics of Web Scripting.

PRACTICAL:

- Creating forms to implement all the VB controls given in the syllabus above.
- Developing a Mini Project in any application area using VB.

REFERENCE:

1. Greg Perry, Snajaya Hettihewa, "SAMS Teach Yourself Visual Basic 6 in 24 Hours", Pearson Education.
2. Tim Anderson, "Visual Basic 6 in Easy Steps", Dreamtech Press.
3. Steven Holzner, "Visual Basic 6 Programming Black Book", Dreamtech Press.

XXX – IT Elective I **Software Engineering**

THEORY 60

PRACTICAL 40

- Introduction, Role and Nature of Software, Software Terminologies, Role of Management in Software Development.
- Software Life Cycle Models – Build and Fix Model, Water Fall Model, Prototyping Model, RAD Model, Spiral Model, Iterative Enhancement Model, The Unified Process, Selection of a Life Cycle Model.
- Analysis – Requirements Engineering, Types of Requirements, Feasibility Study, Requirements Elicitation, Requirements Analysis, Requirements Documentation, Requirements Validation, Requirements Validation, Requirements Management.
- Project Planning – Size Estimation, Cost Estimation, Models, COCOMO, Risk Management.
- Design – Importance, Objectives and Types of Design, Modularity, Design Strategies, IEEE Recommended Practice of Software Design, Object Oriented Design.
- Software Testing – Strategic Approach to Software Testing, Basic Terminologies, Functional Testing, Structural Testing, Levels of Testing, Validation Testing, Art of Debugging, Testing Tools.

PRACTICAL:

- Preparation of Design Specification of a particular Domain according to IEEE Recommended Practice for Software Design Descriptions.

REFERENCE:

1. Roger S. Pressman, “Software Engineering – A Practitioner’s Approach”, McGraw Hill Companies.

K. K. Aggarwal, Yogesh Singh, “Software Engineering”, New Age International Publications.

Internet Programming

THEORY 60

PRACTICAL 40

- Introduction to Internet & WWW, Client Server Model, protocol, IP address, Domain Name, basics of HTML, DHTML, CSS and Content Management Systems.
- Scripting, types of Scripting & languages, JavaScript basics & elements, Data Types, variables, operators, conditional statements, looping statements, array, date, string, objects, functions and Input functions
- Document object model, document, image, browser objects, Forms and elements, Event handling, validations.
- Server Side scripting, client server responsibilities, JSP Architecture, JSP Servers, tags, request and response objects, Introduction to JDBC, SQL statements
- Java Servlets, Servlet Environment, role, JWS, Servlet life cycle, HTML to servlet communication.

PRACTICAL:

- Web page designing using HTML, CSS, JavaScript and JSP.
- Installing and Executing Servlets.

REFERENCE:

1. C. Xavier, "Web Technology & Design", New Age International Publishers.

Advanced Networking

THEORY 60

PRACTICAL 40

- Introduction: Network Definition, Basic components of a network, network types and topologies, Uses of computer networks, network architecture. Transmission Media: Coaxial cable, twisted pair cable, fiber optics & satellites. OSI referable model, TCP/IP references model, comparison of OSI and TCP reference model.
- Introduction to Analog and Digital Transmission: Telephone system, Modems, Types of modems, pulse code modulation. Transmission & Switching: Multiplexing, circuit switching packet switching, hybrid switching, ISDN service transmission.
- Local Area Network Protocols: CSMA Protocols, BRAP, MLMA, IEEE standards 602, Token Bus, Token Ring, FDDI.
- Data Link Layer Design Issues: Services provided to Network layer framing, error control, flow control, link management. Error detection & correction, Elementary Datalink Protocols.
- Design Issues of Network Layer: Services provided to transport layer, routing, connection, internet & world wide web.
- Network Security and Privacy: Brief Introduction to Cryptography.
- Network Services: File transfer, Access & Management, Electronic Mail, Remote logic.

PRACTICAL:

- Setting up a workgroup, domain, peer-to-peer network.
- Configuring & creating user logins, profiles, roles, and setting policies.
- Using FTP & E-mail software.

REFERENCE:

1. Tannenbaum, A.S., "Computer Networks", Prentice Hall.
2. Stallings William, "Data and Computer Communications", Pearson Education.
Stallings William, "Local and Metropolitan Area Networks", Pearson Education.

DETAILED SYLLABUS
FOR
BCA-VI SEMESTER

XXXI - BUSINESS LAW III

THEORY 60

SESSIONAL 40

- Concept of Cyber Crime and the IT Act 2000, Hacking, Teenage Web Vandals, Cyber Fraud and Cyber Cheating, Virus on the Internet, Defamation, Harassment and E-mail Abuse, Cyber Pornography, Other IT Act Offences, Monetary Penalties, Adjudication and Appeals under IT Act 2000, Network Service Providers, Jurisdiction and Cyber Crimes, Nature of Cyber Criminality, Strategies to Tackle Cyber Crime and Trends, Criminal Justice in India and Implications on Cyber Crime.
- Contracts in the Infotech World, Contract Formation on Internet, Terms and Conditions on Contracts.
- Copyright – Meaning, Ownership and Assignment, Licence of Copyright, Copyright Protection of Content on the Internet.
- Digital Signatures, Digital Signature Certificate, Certifying Authorities and Liabilities.
- Protection of Cyber Consumers in India – Consumer Protection Act, Consumer Complaint, Defects in Goods and Services, Restrictive and Unfair Trade Practices, Instance of Unfair Trade Practices, Reliefs under CPA, Consumer Foras, Jurisdiction and Implications on Cyber Consumers in India.

SESSIONAL:

- Two Tests of 10 Marks Each.
- Two Tutorials of 10 Marks Each.

REFERENCE:

1. Vivek Sood, "Cyber Law Simplified", Tata McGraw Hill.
2. Suresh T. Vishwanathan, "The Indian Cyber Law", Bharat Law House.

**BCA-VI Semester
XXXII - Business Elective II
(Choose any One Elective)**

E-1 Services Marketing

E-2 Hospitality Management

E-3 Export Management

XXXII - BCA V Semester : Business Elective II

E-1: SERVICES MARKETING

Theory Marks: 60
Sessional Marks: 40

Objective: The course aims at making students understand concepts, philosophies, processes and techniques of managing the service operations of a firm

Unit I

Introduction: Difference between product and services marketing; Characteristics of services; Classification of services; Paradigms in services marketing Service marketing system: Service quality; Understanding customer expectations and zone of tolerance; Segmentation and zone of tolerance; Targeting and positioning of service

Unit II

Services marketing mix: Augmented marketing mix; Developing the service product/intangible product; Service product planning; Service pricing strategy; Services promotions; Services distributions

Unit III

Physical evidence: Role of communication in service marketing; People and internal communication; Process of operations and delivery of services; Role of technology in services marketing.

Unit IV

Marketing the Financial Services: Deciding the service Quality, Understanding the customer expectation, segmenting, targeting, and positioning of Financial Services, Devising Financial Services Marketing Mix Strategies with special reference to Credit Cards, Home Loans, Insurance and Banking.

Suggesting Readings

- 1)) Lovelock- Services Marketing: People, Technology and Strategy (Pearson Education, 5th edition) 2001.
- 2) Rampal and Gupta –Services Marketing –Sultan Chand
- 3) Bhattacharjee-Services Marketing –Excel publishers
- 3) Zeithaml- Services Marketing (Tata McGraw-Hill, 3rd edition) 1999.
- 4) Rama Mohana Raok - Services Marketing (Pearson Education)
- 6) Govind Apte- Services Marketing (Oxford Univ. Press)

Sessional Work: Marks 40

Marks

- | | |
|-----------------------------------|----|
| 1. Attendance | 10 |
| 2. Two Class Test of 5 Marks each | 10 |
| 3. Tutorials /Assignment | 10 |
| 4. Seminar on any Topic | 05 |
| 5. Group Discussion on any Topic | 05 |

XXXII - BCA V Semester : Business Elective II

E-2: HOSPITALITY MANAGEMENT

Theory Marks: 60

Sessional Marks: 40

Objective: To explain Business Management of Tourism sector.

Unit I

The World of Hospitality: Introduction to Hotel, Travel and tourism Industry -Nature of Hospitality: Communication, Turnover, Demands and Rewards

Unit II

The Organization and Structure of Lodging Operations: Size and Scope of the Industry - Classifications of Hotels - Hotel Market Segments - Organization of Hotels -Organization of Hotel and Restaurant Food Service - Management and Operation of Food Services

Unit III

The Rooms Division: The Front Office Department - The Reservation Department -The Telecommunications Department - The Uniformed Service Department

Unit IV

Hospitality Marketing: Distinctive characteristics - Seven Ps of Marketing –Segmentation, Targeting and Positioning - Future trends in Hospitality Industry: Usage of CRS in Hotel Industry, Chain of hotels- Role of Associations in hospitality management

REFERENCE:

1. Gray and Ligouri: Hotel and Motel Management and operations (Delhi: Prentice Hall India) 2002
2. Andrews: Hotel front office training manual Bombay: Tata McGraw Hill, 2002.
3. Negi: Hotels for Tourism Development Delhi: Metropolitan India, 2004.
4. Negi: Professional Hotel Management Delhi: S.Chand 2003

Sessional Work: Marks 40

Marks

- | | |
|-----------------------------------|----|
| 1. Attendance | 10 |
| 2. Two Class Test of 5 Marks each | 10 |
| 3. Tutorials /Assignment | 10 |
| 4. Seminar on any Topic | 05 |
| 5. Group Discussion on any Topic | 05 |

XXXII - BCA V Semester : Business Elective II

E-3: EXPORT MANAGEMENT

Theory Marks: 60

Sessional Marks: 40

Objective: This subject presents the obstacles, strategies to globalization and the hurdles in exporting in the organization. This subject enables the students to learn the globalization and exports concepts with respect to Indian Economy.

UNIT – I

India's merchandise trade – review of the trade performance – comparative export performance of India – Share of India in World Exports -Hurdles in Exporting from India – Major Problems – lack of integrated approach – technological factors – Supply Problems – Infrastructural bottlenecks – structural weakness.

UNIT II

Exports from India – Preliminary for starting export – Kind of Export Business organization – Factors – Mode of operations – Naming the business – Selecting the company – Profile of the company –Details

UNIT III

Selecting export markets – selecting prospective buyers – Selecting channels of distribution – Negotiating with prospective buyers – Processing an export order – Entering into export contract – Different aspects of export contract – Arbitration.

UNIT IV

Incentives: Incentives – as tool for promotion of exports – Duty exemption – Duty drawback – bonafide of MODVAT – awards – CCS – Import Replenishment (REP) licenses – IPRS – Other incentives- Promotion Measures & assistance for export of Garments – Software – Leather – Handloom – Marine product exports.

UNIT V

Export Assistance: Assistance to exporters – Importance – Production assistance – EPZs – EOUs – Software – Technology parks – EHTPs – SEZ – AEZ – Marketing Assistance.

UNIT VI

Special Economic Zones: SEZ – Objectives – Advantages to exporters – Incentives – Evaluation – Foreign Trade, Policy and SEZs – Current issues – Future of SEZs.

Suggested Readings:

1. Export Management – Cherunilam Francis – Prentice Hall
2. Foreign Exchange & Risk Management – Dr. Jeevanandam . Sultan Chand.
4. Indian Economy: Performance and Policies – Uma kapila
5. Exporter's Manuel – Nabhi publications

Sessional Work: Marks 40

Marks

- | | |
|-----------------------------------|----|
| 1. Attendance | 10 |
| 2. Two Class Test of 5 Marks each | 10 |
| 3. Tutorials /Assignment | 10 |
| 4. Seminar on any Topic | 05 |
| 5. Group Discussion on any Topic | 05 |

XXXIII - ELEMENTS OF COMMERCIAL PORTALS

THEORY 60

SESSIONAL 40

- Internet Technology, Packet switched networks, TCP/IP Internet protocols, Domain Names, URL, HTTP, FTP, POP, SMTP, IMAP, Ping.
- Markup languages and Web, Introduction of SGML, HTML & XML, links, HTML Editor, Web Client/ Server Architecture and Communication, Internet, intranet, extranet, VPN, ISP, IAP.
- Web Server, Web Server hosting performance evaluation, Web Server Software features, Site Management, Site Development.
- Web Server Software, Apache HTTP Server, IIS, Netscape Enterprise Server, Web Server tools, Web Portals, Search Engine, Intelligent agent, Push technologies.

SESSIONAL:

- Two Tests of 10 Marks Each.
- Two Tutorials of 10 Marks Each.

REFERENCE:

1. Gary P. Schneider & James Perry "Electronic Commerce, Thomas Course Technology
2. Ravi Kalakota & Marcia Robinson "E-Business" Pearson Education,

XXXIV - SYSTEM PROGRAMMING

THEORY 60

SESSIONAL 40

- Evolution and Components of System Programming, Assembler, Loaders, Compilers, Macros, Interpreters, Linkers.
- Machine Structure, Machine language & Assembly language.
- Assembler: Functions of assembler, general design procedure, design of assembler, Table processing searching and sorting techniques.
- Loader: Loader schemes, Compiler & Go Loader, General Loader Scheme, Absolute loaders, subroutine linkages, relocating loaders, Direct linking loaders.
- Macros: Macro language & processors feature of macro facility, macro instruction, arguments.
- Programming languages: Importance of High Level Language, Features, Data Types and data structure, Storage allocation, accessing flexibility, Functional modularity.

SESSIONAL WORK:

1. Two Tests of 10 Marks Each.
2. One Tutorial of 10 Marks.
3. One Case Study of 10 Marks.

REFERENCE:

1. John N. Donovan "System Programming" Tata McGraw Hill.
2. D. M. Damdhare "System Programming & Operating System" Tata McGraw Hill.

XXXV – IT Elective-II

Software Testing and Quality Assurance

THEORY 60

PRACTICAL 40

- Software Quality Assurance – Software Engineering, Criteria for the Success of Software Project, Process-Oriented Software Development, the Management Process.
- Metrics in Software Development, Documentation, Quality Standards, ISO 9000 Series Standards, Quality Process Implementation Issues.
- Software Testing – Psychology of Testing, Verification and Validation, Testing Team and Development Team, Characteristics of Test Engineers, Levels of Testing, Top-Down versus Bottom-Up Testing, Types of Testing – Black Box, White Box, Gorilla, Beta, Field, Performance, Stress and Acceptance Testing, Criteria for Completion of Testing, Manual Testing and its Limitations.
- Overview of Testing Tools – Need for Automated Testing Tools, Taxonomy of Testing Tools, Functional/Regression Testing Tools, Performance Testing Tools, Testing Management Tools, Source Code Testing Tools, How to select a Testing Tool.
- WinRunner – Overview of WinRunner, Testing Applications using WinRunner.

PRACTICAL:

- Testing Applications using WinRunner Testing Tool.

REFERENCE:

1. K.V.K.K. Prasad, “Software Testing Tools”, Dreamtech Press.
2. Louise Tamres, “Introducing Software Testing”, Pearson Education.
3. Borris Beizer, “Software Testing Techniques”, Dreamtech Press.

Linux Administration

THEORY 60

PRACTICAL 40

- Linux – The Operating System, Open Source Software, GNU, GNU Public License, Advantages of Open Source Software, Difference between Windows and Linux.
- Installing Linux – Hardware and Environmental Considerations, Server Design, Dual-Booting Issues, Methods of Installation, Installing Fedora, Installing Ubuntu Server.
- Common Commands – Clocks, Daemons, Hardware, Host Information, Installation, Mail, Managing Filesystems, Managing the Kernel, Networking, Printing, Security and system Integrity, Starting and Stopping the System, System Activity and Process Management, Users, Miscellaneous. Overview of Networking – TCP/IP Administration, NFS and NIS Administration.
- Boot Methods – The Boot Process, LILO, GRUB, Dual-Booting Linux and Windows XP/Vista, Boot-Time Kernel Options.
- The Bash Shell – Features, Invoking the Shell, Syntax, Functions, Variables, Arithmetic Expressions, Command History, Job Control, Command Execution, Restricted Shells, Built-in Commands.

PRACTICAL:

- Installing and running Linux Operating System.
- Executing Linux Commands.
- Administering Linux.

REFERENCE:

1. Ellen Siever, Stephen Figgins, Robert Love, Arnold Robbins, “Linux in a Nutshell”, O’Reilly.
2. Wale Soyinka, “Linux Administration: A Beginner’s Guide”, McGraw Hill Companies.

Mobile Computing

THEORY 60

PRACTICAL 40

- Introducing the Mobile Internet: The Mobile Internet is here, The Rise of Mobile data. Key Services for the mobile Internet, Business opportunities.
- WAP: the Mobile Internet Standard: Making the Internet Mobile: Challenges and Pitfalls, Overview of the Wireless Application Protocol.
- Implementing WAP Services: The Wireless Markup Language, Enhanced WML: WML Script and WTAI, User Interface Design: Making Wireless Applications Easy to Use.
- Advanced WAP: Tailoring Content to the Client, Push Messaging, Wireless Telephony Applications, Building and Deploying End-to-End WAP Services. Where Next: The Mobile Internet Future.

PRACTICAL:

- Writing and implementing scripts using WML.

REFERENCE:

1. Sandeep Singhal, "The Wireless Application Protocol, Writing Applications for Mobile Internet", Pearson Education, 2000

XXXVI - PROJECT

PRACTICAL 100

Every Student is required to undertake a Software Development Project. The Project Work can be done by one Student or by a Group of Students (not exceeding Three per group). The Project should be completed under the Guidance of a Faculty Member of the Institute/College.

The evaluation of the Project will be based on the Project Report submitted by the Developers (Students) and Project Presentation followed by an open Viva Voice to be conducted by an External Examiner appointed by the University.

The Project Report should clearly state all the details with respect to Analysis, Design, Coding, Testing and Implementation stages of Software Engineering Concepts.

The Project Presentation should be held at the concerned Institute/College or at a place decided by the University in the presence of Students and External Examiner. The External Examiner will submit the marks directly to the University.

--**--

S*/-160611/-