DETAILED SYLLABUS FIRST SEMESTER

BACHELOR OF COMPUTER APPLICATION (B.C.A.) Computer Fundamentals and MS-Office

PAPER CODE: C-101

UNIT-I

Introduction to Computers: Block diagram of computer. Types of computers and features, Mini Computers, Micro Computers, Mainframe Computers, Super Computers. Types of Programming Languages (Machine Languages, Assembly Languages, High Level Languages). Types of Memory (Primary and Secondary) RAM ROM, PROM, and EPROM. Secondary Storage Devices (FD, CD, HD, Pen drive) 1/0 Devices (Scanners, Plotters, LCD, Plasma Display) Number Systems Introduction to Binary, Octal, Hexadecimal system Conversion, Simple Addition, Subtraction, Multiplication.

UNIT-II

Algorithm and Flowcharts Algorithm: Advantages and disadvantages, Flowchart: Definition,

Define symbols of flowchart.

UNIT-III

Services in O.S., DOS, Files and Directories, Batch Files, Types of O.S.

UNIT-IV

Features of MS-Windows, Control Panel, Icons, Windows Accessories, Paintbrush.

UNIT-V

Editors and Word Processors Basic Concepts, Examples: MS-Word. Spread sheets and Database packages Purpose, usage, command, Creation of files in MS-Access, MS-PowerPoint.

Suggested Books:

1. V.Rajaraman "Fundamental of Computers", B.P.B. Publications 2. P.K. Sinha "Fundamental of Computers"

3. Steve Sagman "MS-Office 2000(For Windows)" 4. Tennenbum Tata MacGraw "Computer Networks", Hill Publication

Introduction to Programming using C

UNIT-I

C basics: C character set, Identifiers and keywords, Data types, constants, variables and arrays, declarations, arithmetic operators, unary operators, relational and logical operators, assignment operators, conditional operators.

UNIT-II

Decision Control Structures: If Statement, If-else statement, Nested if (), Switch, case statement, Iterative statements: For loop, While loop, Do-while () loop, Conditional statements: Break. Array: Declaration of an Array, Initialization of Array, Types of Array: Single Dimension Array, Two, Dimensional Array, Address Calculation of an Element of a 2-D Array

UNIT-III Functions: Library Functions, User Defined Functions, Function Declaration, Types of

Arguments: Actual Arguments, Formal Arguments, Function Definition, Passing Arrays as

Parameters, Methods to Call a Function: Call by Value, Call by Reference.

UNIT-IV

Pointers: Declaration of Pointer Variables, Pointer Arithmetic

UNIT-V

Structures, Unions, Array of Structures, File Handling: Opening a File, Closing a File, File, Opening Modes, Reading from and Writing to a File, Copying Content of an Existing File to another.

Suggested Books:

1. E.Balagurusamy, "Programming in ANSI C", TMH 2. Peter Norton's, "Introduction to Computers", TMH

3. Yashwant Kanetkar, "Let us C", BPB

FIRST SEMESTER PAPER CODE: C-103
Business Communication and Soft Skills

UNIT-I

Means of Communication: Process, Functions, Objectives, Importance, Communication barriers, 7C's of Communication, Types of Communication: Meaning, nature and scope.

UNIT-II

Oral communication: Principle of effective oral communication Techniques of effective speech,

Media of oral communication (Face, to, face conversation, Teleconferences, Press Conference, Demonstration, Radio Recording, Dictaphone, Meetings, Rumour, Demonstration and Dramatisation, Public address system, Grapevine, Group Discussion, Oral report, Closed circuit TV). Written Communication Principle of Effective writing, Writing Techniques, Electronic Writing

Process.

Business Letters & Reports: Need and functions of business letters, Kinds of business letters, Purpose, Kind and Objective of Reports, Writing Reports.

UNIT-III

Drafting of business letters: Enquiries and replies, Placing and fulfilling orders, Complaints and follow, Circular letters Application for employment and resume. Information Technology for Communication: Word Processor, Telex, Facsimile(Fax), E-mail, Voice mail, Internet Multimedia, Teleconferencing, Mobile Phone Conversation, Video Conferencing, SMS, Telephone Answering Machine, Advantages and limitations of these types. Self Analysis: SWOT Analysis, Who am I, Attributes, Creativity: Out of box thinking, Lateral Thinking.

UNIT-IV

Attitude: Factors influencing Attitude, Etiquette. Motivation: Factors of motivation, Self talk,. Goal Setting: Wish List, SMART Goals, Short Term, Long Term, Life Time Goals. Interpersonal Skills: Gratitude: Understanding the relationship between Leadership Networking & Team work. Assessing Interpersonal Skills Situation description of Interpersonal Skill. Team

Work: Necessity of Team Work Personally, Socially and Educationally.

DR. BHIMRAO AMBEDKAR UNIVERSITY, AGRA

UNIT-V

Leadership: Skills for a good Leader, Assessment of Leadership Skills, Stress Management: Causes of Stress and its impact, Stress Busters. Emotional Intelligence: What is Emotional Intelligence,

Emotion Scales, Managing Emotions. Conflict Resolution: Conflicts in Human Relations Approaches to conflict resolution. Decision

Making: Importance and necessity of Decision Making, Weighing Positives & Negatives.

Suggested Books:

1. K.K. Sinha "Business Communication", Galgotia Publishing Company, New Delhi. 2. C.S. Rayudu "Media and Communication Management", Hikalaya Publishing House, Bombay. 3. Rajendra Pal and J.S. Korlhalli, "Essentials of Business Communication", Sultan Chand & Sons

UNIT-I

World Wide Web, Web page, Home page, Web site, Static, Dynamic and Active web page. Overview of Protocols, Simple Mail Transfer Protocol, Gopher, Teinet, Emails, TFTP, Hyper Text Transfer Protocol, Client server computing concepts. Web Client and Web Sever Web Browser, Browsers: Internet Explorer, Mozilla Firefox, Client, Side Scripting Languages, VB Script and Java Script, Active X control and Plug-ins, Web Server Architecture, Image maps, CGI, API web database connectivity, DBC, ODBC

UNIT-II

Dynamic HTML, CSSP (Cascading Style Sheet Positioning) and JSSS (JavaScript assisted Style Sheet), Layers of Netscape, The ID Attribute.

UNIT-III

Introduction to HTML: Element, Attribute, Headings, Paragraphs, Styles, Formatting.

Comments, CSS, Links, Images, Tables, Lists, Blocks, Classes, ID, frames, File Paths, Head,

Entities, Symbols, Color and Background of Web Pages, Hypertext, Hyperlink and Hypermedia,

Links, Anchors and URLS, Links to External Documents, Different Section of a Page and Graphics,

Creating Table, Frame, Form and Style Sheet.

UNIT-IV

CSS: Syntax, Colors, Backgrounds, Borders, Margins, Padding, Height/ Width, Box Model, Outline, Text, Fonts, Icons, Links, Lists, Position, Overflow, Float, Inline, Block, Align, Navigation Bar, Dropdowns, Image Gallery, Image Sprites, Attr Selectors, Forms, Counters, Website Layout, Units, Specificity.

UNIT-V

XML: Elements, Attributes, Namespaces, Display, HTTP request, Parser, DOM, XPath, XSLT, XQuerry, XLink, Validator, DTD, Schema, Server

Suggested Books:

1. Shelley Powers, "Dynamic Web Publishing" .

Mathematics-l

UNIT-I

Determinants: Definition, Minors, Cofactors, Properties of Determinants Matrices: Definition, Types of Matrices, Addition, Subtraction, Scalar Multiplication and Multiplication of Matrices, Cramers Rule, Rank of Matrix Dependence of Vectors

UNIT-II

Limits & Continuity: Limit at a Point, Properties of Limit, Computation of Limits of Various Types of Functions, Continuity at a Point, Type of Discontinuities

UNIT-III

Differentiation: Derivative, Derivatives of Sum, Differences, Product and Quotients, Chain Rule,

Rolle's Theorem, Mean Value Theorem, Expansion of Functions (Maclaurin's and

Taylor's), Indeterminate Forms, L-Hospitals Rule, Maxima and Minima.

UNIT-IV

Integration: Integral as Limit of Sum, Fundamental Theorem of Calculus(without proof.),

Indefinite Integrals, Methods of Integration Substitution, by Parts, Partial Fractions.

UNIT-V

Vector Algebra: Definition of a vector in 2 and 3 Dimensions, Double and Triple Scalar and

Vector Product.

Suggested Books:

1. B.S. Grewal, "Elementary Engineering Mathematics", 34th Ed., 1998. 2. Shanti Narayan, "Integral Calculus", S. Chand & Company, 1999 3. H.K. Dass, "Advanced Engineering Mathematics", S. Chand & Company, 9th Revised Edition, 2001.

4. Gorakh Prasad and Chandrika Prasad, "Differential and Intigration"