

VEER NARMAD SOUTH GUJART UNIVERSITY, SURAT

B.COM. (COMPUTER APPLICATION)

(VOCATIONAL COURSE)

SYLLABUS

(With Effect from: 2009-10)

F.Y.B.Com. : Computer Application :: Paper – I

(Computer Fundamental & Word Processing)

Elements of Computer:

[05%]

What is computer? – What is digital computer – Function of Digital computer – component of Computer – Function of Input device, Process device and output device – How the system works to gather – characteristics of computer – Computer system organization. Hardware – Software – System Software – Application software. What is programming language? – Type of programming language – Low level programming language – high level programming language Classification of computers – Micro – Mini- Main Frame – Super

Computer Hardware :

[05%]

Functioning of CPU, Types of Microprocessor, Address, Control and Data Bus. – Main memories – Secondary memories – Memory system hierarchy – Hard disk – Internal architecture of hard disk - Mechanism of storage data on hard disk- Floppy disk, Pen drive

Windows O.S.

[10%]

Evaluation & History of Operating System – Need of an operating system – **Types** of an operating system – Multi user operating system – single user operating system – **Function** of operating system(brief).

Search Facility of windows.

File management commands: Rename, Delete, Cut, Copy , Paste – Windows explorer – **Desktop properties** – Folders – shortcuts – Menu. Close – minimize – maximize, restore – button. **Accessories:** Entertainment tools – Sound recorder – Volume controller – Window media player. **Overview** of Word pad, Notepad and MS-Paint, Calculator.– Recycle bin, Control Panel Date & Time - Display – Fonts – Mouse – Keyboard – Printer – Fonts – Sound & Audio device – Sound effect manager.

Microsoft Word:**[30%]**

Applicability and importance of Ms-Word. File Menu: Open, Close, Save, Save-As, Search file, Page Setup, Print Pre-view, Print. Edit Menu: Undo, Redo, cut, copy, paste, paste-special, select all, Find, Replace, Goto, Office clipboard View Menu: Normal, Outline, Page layout, Master document, Full screen, Toolbar, Ruler, Header & footer, Zoom. Insert Menu: Page number, date & time, Field, Symbol, Auto Text, Comment, Picture, Object, bookmark, hyperlink. Format Menu: Font, Paragraph, Bullets & Numbering, Tab, Columns, Change case, Drop cap, Style gallery. Tool Menu: Spelling & Grammar checking, Word count, Auto correct, Mail Merge, Macro, option. Table Menu: Insert Cell, Delete Cell, Merge Cell, Split Cell, Format Cells, Sort.

Practical**[50%]**

Practical Based on above subject content

Reference Books:

1. Computer Fundamentals - By P.K.Sinha (BPB Publication)
2. Fundamental of Computer – By V. Rajaraman
3. Fundamentals of computer – By SukhVEER singh (Khanna Publisher)
4. Fundamentals of Computer and programming – By D.Jinwala &
Bankim Patel (Benison Education Publication)
5. Teach Your self word 2000 in 21 days - Heidi Steele
6. Mastering MS Word - BPB Publication
7. MS Office 2000 (Gujrati) - Venus Publication
8. Personal Computer, Windows and MS office-2000 – By Hemang
Antani & Keyur Shah.

S.Y.B.Com. : Computer Application - Paper :: II
(Computer Programming and Accounting Tools)

Programming Language: (Q-Basic)

[15%]

Programming Language Concepts

What is Program , S/W and types S/W

Level of Programming Language

Concept of Compiler and Interpreter

Problem Analysis

Constant & Variables.

Character set.

Constants need and definition.

Variable Needs and definition.

Expressions & Operations

Operators

Expression

Evaluation & Assignment of Expression

Input and Output Statement

Jumping, Branching and Looping Statements

Built in Function: Mathematical & String Functions

Concept of Array

One dimension array

Simple sort using one dimension array

Concept of two dimension array

Concept of Debugging & Run the Program.

Concept of some common bugs.

Microsoft Excel:

[20%]

Applicability and importance of Ms-Excel. File Menu: New, Print Pre-view, Print. Edit Menu: Find, fill series, Paste Special, clear. Insert Menu: Worksheet, Chart, Function, Object. Format Menu: Auto Formatting, Conditional formatting, Style. Tool Menu: Protection, Goal Seek, Solver, options. Data Menu: Sort, Form, subtotal, Validation, Text to column. Window Menu: Freeze Panes, Split window, arrange window.

Function should be taught separately like:

Statistical Function:

AVERAGE, AVERAGEA, COUNT, COUNTA, COUNTIF, MAX, MAXA, MIN, MINA, MEDIAN, MODE, VAR, VARP, STDEV, STDEVP,

Financial Function:

FV, PV, IPMT, IRR, NPER, PMT, RATE

String Functions:

LEFT, RIGHT, MID, LEN, LOWER, UPPER, PROPER, REPLACE, FIND, SEARCH, FIXED, REPT, SUBSTITUTE, CHAR, CLEAN, CODE, CONCATENATE, EXACT, TEXT, VALUE, TRIM

Logical Functions:

AND, OR, NOT, IF, TRUE, FALSE, ISBLANK, ISERROR, ISLOGICAL, ISNUMBER, ISTEXT

Date & Time Functions:

DATE, DATEVALUE, DAY, DAYS360, HOUR, MINUTE, MONTH, NOW, SECOND, TIME, TIMEVALUE, TODAY, WEEKDAY, YEAR

Lookup and reference:

CHOOSE, VLOOKUP, HLOOKUP, ROW, ROWS, COL, COLS.

Accounting Package (Tally) :

[15%]

Start-up Screen , Create Company, Select Company, Shut Company, F11- Feature and F12-Configuration. Master Entry, Voucher Entry and look-up of various final statements. Take a textbook example of Financial Accounting Application and make it practically solve.

Practical

[50%]

Practical Based on above subject content

Reference Books:

1. Programming in Basic- Balaguruswami (TMH)
2. Programming expertise in Basic – Kanetkar (BPB)
3. Programming with Basic - Gottfried – (TMH)
4. Structured Programming Language – La Budde – Mc Grow Hill
5. Compute system and application – By Rustam Shroff (Himalaya)
6. Mastering MS Office – 2000 – By Gini Courter & Abette Mar.(BPB)
7. Teach your self – Excel 2000 in 21 days – BPB Techmedia Pub.
8. Comdex Tally 9 Course Kit - By Namrata Agrawal (DreamTech Press)
9. Implementing Tally 7.2 - By A.K. Nadhani & K.K.Nadhani
10. Tally Tutorial (Vol-I) Accounts – A.K.Nadhani
11. Tally 7.2 (Gujarati Version) - Venus Publication

S.Y.B.Com. : Computer Application :: Paper – III
(Multimedia and Web Designing)

Introduction to Multimedia and Graphics [05%]

Components, Application

Graphics

Image Compression Technology

Lossy Compression

Lossless Compression

Bitmap and Vector Graphics

File Formats

JPEG, GIF, PNG

Creating Web Sites

Using Front Page [10%]

Table, Form, Frame, Link Bars, Theme, Font, Picture, DHTML effects

Styles, Publish

Using HTML [10%]

Structure, Text and Paragraph Formatting Tags, Headings

Links, Table, Form, Frame, Image Maps, Audio and Video Tags

Hosting Web Pages [05%]

Domain Name System

Protocols

Window Based FTP (Upload and Download)

Role of Web Server in Web Publishing

Communication Betw. Web Server & Web Browser

Animation (Using Flash) [20%]

Introduction

Toolbox and toolbars

Types of animation

Key Frame

Twinning

Shape, Motion

Use of Movie Clips, Buttons, Graphics

Scripting

Basic Actions

Go To, Play, Stop, Get URL, FSCommand, Load Movie

Layers

Concepts, Uses, Inserting and Deleting, Motion Guide Layer

Publishing Animation

Practical

[50%]

Practical Based on above subject content

Reference Books:

1. Microsoft FrontPage 2000 – J.O.Leavy TMH
2. Microsoft FrontPage 24 Hours – Roger C Teclunedia
3. Advanced HTML companion – Keith S. & Roberts – AP Professional
4. Principle of Interactive Multimedia – Elsom Cook – TMH
5. 3D Computer Animation – Vince – Addison Wesley
6. How to Create Web page using HTML – K. London TMH
7. 3D graphics tips, tricks & Techniques – Calwick – AP Professional
8. Mastering Photoshop 6.0 BPB Publication Steve Temaniello
9. Flash 4 Bible – IDG Books India – Rennardt, Robert
10. Flash 4 Magic – Tech-Media - Emberton David J.
11. The Complete Reference HTML – TMH Powel, Thomas A.
12. HTML Unleashed – Tech-Media Duneil Kick
13. Microsoft Front Page 2002 24 Hours Techmedia(SAMS) Roger Cadenhead

T.Y.B.Com. : Computer Application :: Paper – IV
(GUI Tools)

Visual Basic

[30%]

Visual Basic Overview:

What is Visual Basic?, Visual Basic Specification, Limitation and File Formats, Introduction to Visual Basic IDE Element – Screen of Visual Basic - Title Bar, Context Menu, Tool Bar, Tool Box, Project Window, Properties Window, Form Designer Window.

Customising a Form and Writing Program:

Creating, Opening, and Saving Project- Working with Multiple Project- Adding, Removing And Saving Files – Setting Project Option – Creating Stand- Alone Executable Windows Programs –Understanding Properties, Methods And Events-Designing A Form - Setting The Startup Form- Steps In Creating Visual Basic Application –Ending A Visual Basic Application.

Default Visual Basic Control:

Adding Control to the Form – Resizing, Moving and Looking Control- Setting Properties of the control.

Using Text Boxes, Command Button, Labels, Option Buttons, Check Boxes, List Boxes, Combo Boxes, Image Control, Picture Box, Scroll Bars, Drive List Box, Directory List Box, File List Boxes, Frame Controls, Timer Controls. (Commonly Used Properties, Event and Methods of all the control to be taught) Understanding the concept of control array.

Common Form Properties (Name, Caption, Appearance, Border Style, Control Box, Maxbutton, Minbutton, Font, Height, Width, Left, Top Mouse Pointer, Showintaskbar, Startup Position, Enabled, Visible, Window State, BackColor, ForeColor, ScaleMode)

Common Form Method (Load, Unload, Show, Hide, Move, Cls, Print, Set Focus)

Common Form Event (Activate, Deactivate, Load, Unload, Initialize, KeyDown, KeyPress, KeyUp, Dbclick, Gotfocus, Lostfocus, Mousedown, Mousemove , Mouseup , Resize, Queryunload , Terminate).

Programming Fundamental:

What Is Variable?, storing and retrieving data in variable- Explicit Declarations and Implicit Variable Declaration – Scope of Variable- Static Variable – Type of Variable – Numeric, String, Variant, Data and Object.

What is constant- Type of Constant- Creating Your Own Constant- Scoping User Defined Constant.

Using Operator in Visual Basic- Arithmetic, Relational, Logical, Assignment and Comparison Operator.

Control Flow Statements

If...Then...Else... End if , Nested If,
Select Case Statement,
For...Next Statement,
Do...Loop Statement,
While... Wend Statement,
Nested Control Structures and the Exit Statement.

Introduction to Arrays- Multidimensional Arrays-Dynamic Arrays. Introduction to procedures and functions- Calling Subroutines- Calling Functions- Argument- argument passing mechanisms- Passing Argument By Reference- Passing argument By Value- Passing Unknown Name of argument.

Visual Basic Built-In-Function:

String Function: ASC, CHR, LCASE, UCASE, INSTR, STRCOMP, LEFT, RIGHT, MID, LEN, LTRIM, RTRIM, TRIM, SPACE, STRING, FORMAT.

Numeric Function: ABS, EXP, INT, FIX, LOG, HEX, OCT, RND, SGN, SQR, VAL.

Date and Time Function: TIMER, DATE, TIME, NOW, DAY, WEEKDAY, MONTH, YEAR, HOUR, MINUTE, SECOND, DATESERIAL. TIMESERIAL, DATEADD, DATEDIFF.

Financial Function: IPMT, PPMT, PMT, FV, NPER, RATE,

Variable Type Function: VARTYPE, LBOUND, UBOUND, ISARRAY, ISDATE, ISEMPTY, ISNULL, ISNUMERIC.

Miscellaneous Function: IIF, SWITCH.

Menus MDI and Dialog Box:

Menu Basics- Introduction To Menu Editor- Caption Text Box, Name Text Box, Ok And Cancel Button, Index Box, Shortcut Box, Window List Check Box, Checked Check Box, Visible Check Box, Arrow Button, Next Button, Insert Button, Delete Button- Menu Naming Convention, Creating Submenu, Working With Menu At Run Time- Using Access Key And Shortcut Keys- Creating Popup Menus.

MDI Basics Creating an MDI Application Working With MDI Form and child form, Loading And Unloading Forms.

What is dialog box – Modal And Modless Dialogbox- Inputbox Function- MsgBox Function – Common Dialog Box Control.

Visual Basic and Database:

What Is Activex Control- Loading Activex Control- ADO Data Control. Using ADO Data Control – Setting The Connection String And RecordSource Properties- Working With Cursor Type- Working With Properties Like Bof Action, Eof Action, Lock Type, Binding Control (Textbox Control) To The ADOc – Setting DataSource And Data Field Properties- Adding And Deleting Records With The ADOc And Finding Specific Records.

MS-Access:

[20%]

Creating and Working with Database: What is Database- Creating a Database.

Introduction to Database Objects: able Queries Form Reports

Creating and Working with Table:

Creating Table- Adding Fields To Table- Choosing Data Type – Controlling The Data Entered In The Field, Defining Values And Defining Validation Rules- Creating Primary Key- Creating An Index – Defining Relationship Between Two Or More Tables And Setting Referential Integrity.

Working with datasheet

Inserting and Deleting Rows- Manipulation of records. Working with SQL Queries- Creating And Modifying Queries- Using Multiple Tables In Queries – Using Criteria And Statement To Retrieve Data – Performing Calculation Creating Select Queries Of Action Queries (Make – Table, Delete, Update, Append Queries) – Union- Data Definition- Sub query.

Practical

[50%]

Practical Based on above subject content

Reference Book:

1. Mastering Visual Basic 6.0 - Delaney
2. Learn To Program With Vb6 - john smiley (Microsoft press)
3. Beginning visual basic - Peter Wright's (Shroff Publishers & Distributers Pvt.Ltd)
4. Paul Sheriff Teaches Vb6- (phi)
5. Visual Basic 6 Programming Black Book – Steven Holzner
6. Mastering Visual Basic: By – Computer World
7. Teach yourself access 97 in 24 hours – (Techmedia)
Timothy Buchanan Craig eddy rob new man

T.Y.B.Com. : Computer Application :: Paper – V
(Software Engineering)

SOFTWARE ENGINEERING:

Introduction

[05%]

Software, Software Characteristics, Applications, Myths.

Software Engineering General View

Software Process Models, Waterfall, Prototyping

GL Techniques

Efforts Distribution

Requirement Analysis

[15%]

Introduction

Requirement gathering techniques

DFD, Data Dictionary and Process Specification

Importance of Requirement Analysis

Software Requirement Specification Document

System Design

[20%]

Design Model

Principles and Concepts

Functional Independence

Mapping Requirements into Design

Design Documentation

Software Testing

[10%]

Testing Fundamentals

Functional and Structural Testing

Testing Process

Case Studies carried out in the following Topics with DFD

- On Line Applications

- Payroll System

PROJECT WORK

[50%]

Project Work to be based on Software Engineering guidelines.

Reference Books

1. R.S.Pressman, Software Engineering – A Practitioner’s Approach, - McGraw Hill
2. Pankaj Jalota : An Integrated Approach to Software Engineering
3. Richard Fairley, Software Engineering Concepts – McGraw Hill
4. Elias M : System Analysis and Design – Galgotia Publication