

**ADVANCED DIPLOMA IN COMPUTER APPLICATION (ADCA)**

**SCHEME FORM ADVANCED DIPLOMA IN COMPUTER APPLICATION**

**SEMESTER-1**

Subject Code	Nomenclature of Paper	Maxi. Marks
1 ADCA-1	INCTL Intro	100
1 ADCA- 2	Fundamental of Computer and Information Technology	1000
1 ADCA- 3	FoxPro Programming <i>2.5/2.6</i>	100
1 ADCA- 4	PC- Package	100
1 ADCA - 5	Financial Accounting with Tally	100
3 ADCA- 6	Computer Lab -I	100

**SEMESTER - II**

Subject Code	Nomenclature of Paper	Maxi. Marks
2 ADCA-1	INCTL	100
2 ADCA- 2	OOPS & Programming With C++	100
2 ADCA- 3	Internet & E Commerce	100
2 ADCA- 4	Programming with VB.net	100
2 A D C A - 5	Computer Lab - II	100
2 A D C A - 6	Project Work	100

## Detailed Syllabus

### Unit-I:- INCTL INTRO

- Meaning & Importance of Guru Pujan
- Meaning of Medication, Mann, Intelligence , Chitta, Ego, Thought

# **1ADCA-2- FUNDAMENTAL OF COMPUTERS & INFORMATION TECHNOLOGY**

## **UNIT-I**

Brief history- of development of computers, Computer system concepts, Computer system characteristics. Capabilities and limitations, Types of computers Generations of computers. Personal Computer (PCs) - evolution of PCs, configurations of PCs- Pentium and Newer, PCs specifications and main characteristics. Basic components of a computer system - Control unit, ALU, Input/output functions and characteristics, memory - RAM, ROM, EPROM, PROM and other types of memory.

## **UNIT-II**

Input/output & Storage Units:-Keyboard, Mouse, Trackball, Joystick, Digitizing tablet, Scanners, Digital Camera, MICR, OCR, OMR, Bar-code Reader, Voice Recognition, Light pen, Touch Screen, Monitors - characteristics and types of monitor -Digital, Analog, Size, Resolution, Refresh Rate, Interlaced / Non Interlaced, Dot Pitch, Video Standard - VGA, SVGA, XGA etc, Printers& types - Daisy wheel. Dot Matrix, Inkjet, Laser, Line Printer, Plotter, Sound Card and Speakers, Storage fundamentals - Primary Vs Secondary Data storage and Retrieval methods - Sequential, Direct and Index Sequential, SIMM, Various Storage Devices - Magnetic Tape, Magnetic Disks, Cartridge Tape, Hard Disk Drives, Floppy Disks(Winchester Disk), Optical Disks, CD, VCD, CD-R, CD-RW, Zip Drive, flash drives Video Disk , Blue Ray Disc, SD/MMC Memory cards, Physical structure of floppy & hard disk, drive naming conventions in PC. DVD, DVD-RW.

## **UNIT-III**

Software and its Need, Types of Software - System software, Application software, System Software - Operating System, Utility Program, Programming languages, Assemblers, Compilers and Interpreter, Introduction to operating system for PCs-DOS Windows, Linux, File Allocation Table (FAT & FAT' 32), files & directory structure and its naming rules, booting process details of DOS and Windows, DOS system files Programming languages- Machine, Assembly, High Level, 4GL, their merits and demerits, application Software and its types - Word-processing, Spreadsheet, Presentation Graphics. Data Base Management Software, characteristics, Uses and examples and area of applications of each of them, Virus working principles, Types of viruses, virus detection and prevention, viruses on network.

## **UNIT – IV**

Use of communication and IT , Communication Process, Communication types- Simplex, Half Duplex, Full Duplex, Communication Protocols, Communication Channels - Twisted, Coaxial, Fiber Optic, Serial and Parallel Communication, Modem -Working and characteristics. Types of network Connections - Dialup, Leased Lines, ISDN, DSL, RF, Broad band ,Types of Network - LAN, WANMAN ,Internet, VPN etc., Topologies of LAN - Ring, Bus, Star, Mesh and Tree topologies. Components of LAN -Media, NIC, NOS. Bridges. HUB, Routers, Repeater and Gateways.

## **UNIT-V**

Computer Applications in Business-Need and Scope, Computer Applications in Project Management, Computer in Personnel Administration, Information System for Accounting-Cost and Budgetary Control, Marketing and Manufacturing, Computer Applications in Materials Management, Insurance and Stock- broking, Production planning and Control, Purchasing, Banking, Credit and Collection, Warehousing. Use of computers in common public services and e-governance

## **TEXT & REFERENCE BOOKS :**

Anurag Seetha, "Introduction to Computers and Information

Technology ", Ram Prasad & Sons, Bhopal.S.K.Basandra, "Computers Today Galgotia Publications.

Alexis Leon & Mathews Leon, " Fundamentals of Information technology " Vikas Publishing House, New Delhi.Essential of IT, A.Mansoor, Pragya Publications.

## **1ADCA-3- FOXPRO**

### **UNIT-I**

*FOXPRO - THE RDBMS FOR PC* FoxPro - Versions, features, requirement of Hardware and Software FoxPro - Menu System, Working with FoxPro Creating Database File Some common operations on data\* CREATE,LIST,APPEND, CLOSE, QUIT .FoxPro - Data Types *VIEWING AND EDITING* Data Displaying and Monitoring Commands - DISPLAY, LIST,LOCATE, EDIT, CHANGE, BROWSE, REPLACE, DELETE,RECALL, PACK (All Commands with various *Options*) *MODIFY STRUCTURE, MEMO FIELD AND FILE UTILITIES* .File utilities in FoxPro - DISPLAY DIRECTORY, COPY, DELETE, RENAME,

### **UNIT-II**

*SORTING AND INDEXING OF DATABASE FILES*: Sorting & Indexing Concept Sort Commands - Single & Multiple Key Advantage & Disadvantages of Sort indexing Vs Sorting, Single & Multiple Key, Indexing, FIND, SEEK, Rushmore Technology, *PRINTING REPORTS AND LABELS* FoxPro Report - its creation, features & Utilities, review. Printing Custom Report, grouping & Sub grouping. FoxPro Label - Designing & Printing

### **UNIT-III**

MEMORY VARIABLES, DATE & TIME FUNCTIONS AND KEYBOARD MACROS: Memory Variables - Creation and Uses, Simple Array .Saving and Restoring Memory Variables,,*??/??/???* Commands, Time & Date Functions and Commands, Date Arithmetic, Converting Defining Function Keys Keyboard Macros - Creating and Using *Mathematical COMMANDS AND FUNCTIONS* Arithmetic Operations, Mathematical Functions, Mathematical Commands, Statistical Functions.

### **UNIT - IV**

PROGRAMMING WITH FOXPRO:  
Concepts of FoxPro commands file. Modify Commands ,Conditioning , Branching and Looping within Program files with Do-While Enddo, If - Endif, Scan-Endscan, For - Endfor. Do-case-Endcase, Text - Endtext, Executing Commands from other command files. Macro Substitution *ERROR CONDITIONS AND PROGRAM DEBUGGING AIDS*: Common Error Messages Debugging techniques and commands

### **UNIT-V**

*MULTIPLE DATABASE FILES*.Concept of Multiple Database Files - Using multiple database files » Relating the database - SET RELATION, UPDATE. APPEND FROM,COPY TO, JOIN, Relation Query by Example and SQL CUSTOM SCREENS & USER DEFINE FUNCTIONS & OTHER TOOLS: Create Custom Screen with @\_GET, @EDIT, SAY\_GET\_READ,Creating Box & Lines, User Define Functions, Custom Screen .Designing and their Use, Fox Doc for documentation

#### TEXT & REFERENCE BOOKS :

FoxPro Made Simple by R.K.Taxali, BPB Publications  
Mastering FoxPro 2.5 BPB Publications  
Foxpro 2.6 for Dummies - Pustak Mahal  
Foxpro., A. Mansoor, Gaurav Sharma, Pragya Publications.

## **1ADCA - 4 -PC PACKAGES**

### **UNIT-I**

Office Packages-Office activities and their software requirement,. word Processing, spreadsheet, presentation graphics, database, introduction and comparison of various office suites like MS office, Lotus Office, Star Office, Open Office etc. MS Word Basics; introduction to MS Office; Introduction to MSWord; Features & area of use. Working with MS Word.; Menus & commands: Toolbars & Buttons; Shortcut Menus, Wizards & Templates; Creating a New Document; Different Page Views and layouts; Applying various Text Enhancements; Working with - Styles, Text Attributes; Paragraph and Page Formatting; Text Editing using various features ; Bullets, Numbering, Auto formatting, Printing & various print options

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### **UNIT-II**

Advanced Features of MS-Word: Spell Check. Thesaurus, Find ^Replace; Headers & Footers ; Inserting - Page Numbers, Pictures, Files, Auto texts, Symbols etc.; Working with Columns, Tabs & Indents; Creation & Working with Tables including conversion to and from text; Margins & Space management in Document; Adding References and Graphics; Mail Merge, Envelops & Mailing Labels.

### **UNIT-III**

MS Excel: Introduction and area of use; Working with MS Excel.; concepts of Workbook & Worksheets; Using Wizards; Various Data Types; Using different features with Data, Cell and Texts; Inserting, Removing & Resizing of Columns & Rows; Working with Data & Ranges; Different Views of Worksheets\*, Column Freezing, Labels, Hiding, Splitting etc.; Using different features with Data and Text; Use of Formulas, Calculations & Functions; Cell Formatting including Borders & Shading; Working with Different Chart Types; Printing of Workbook & Worksheets with various options,

### **UNIT-IV**

MS PowerPoint: Introduction & area of use; Working with MS PowerPoint; Creating a New Presentation; Working with Presentation; Using Wizards; Slides &. its different views; Inserting, Deleting and Copying of Slides; Working with Notes, Handouts, Columns & Lists; Adding Graphics, Sounds and Movies to a Slide; Working with PowerPoint Objects; Designing & Presentation of a Slide Show; Printing Presentations, Notes, Handouts with print options.

### **UNIT-V**

Outlook express: Setup email account with outlook, sending and receiving mail through outlook, concepts of CC and BCC, forwarding mail. Draft messages, formatting e-mail message. Concept of MIME Protocol, attaching files and items into messages, inserting hyperlink using outlook editor creating and using send and receive group emails, opening received messages, opening messages with attachment, replying to mail forwarding messages flagging for further action, setting email options, managing contacts with outlook. Setting up multiple email accounts on single machine.

Text & Reference Books:

Windows XP Complete Reference, BPB Publications MS Office XP complete BPB publication MS Windows XP Home edition complete. BPB Publications IT. Tools and Applications, A. Mansoor, Pragma Publications

# **1 ADC A -5 -FINANCIAL ACCOUNTING WITH TALLY**

## **UNIT-I**

Basic Concepts of Accounting, Financial Statements, Financial, Statement Analysis, Cost Centre, Basic concepts of Inventor)', Tally Configuration & INI setup. Data Directory & Folders, configuration, Single & Multiple User, Tally Screen Components. Mouse / Keyboard Conventions & Key, Combinations, Switching between screen areas. Quitting Tally, Maintaining Company Data, Basic Company Details, Create/Alter/Select/Load/Close a Company, Chart of Accounts, Company Features, Configuration.

## **UNIT-II**

Create, Alter & Display Groups and Ledgers, AH accounting voucher types and transactions, Create and Alter new Voucher type, item and Account Invoice transactions, Excise Invoice, Export Invoice, Transactions using Bill-wise details Create, Alter & Display Cost Centre and Cost Categories, Cost centre & Cost Category allocation in voucher entry, Creating Cost center Class, Invoice entry in a Class situation, Create, Alter & Delete Foreign Currencies, Voucher entry using foreign currency, Bank Reconciliation. Interest calculations using simple advance parameters. Interest calculations on outstanding balances" & on invoices, Use of voucher class, adjustment of interest, Creation of voucher class. Invoice entry in a class situation.

## **UNIT-III**

Create, Alter & Delete Budgets for groups, ledgers & cost centers. Defining credit limit & credit period, Display Budgets & variances, Create, Alter & Delete a scenario. Enabling Job Costing in Tally, Master creation & configuration for Job costing. Creation of Voucher type & Voucher class for Stock Transactions, Creation of Transfer journal for transfer of stock between godowns, Consumption journal Transactions, payment voucher, Godown summary- Report, Job Work Analysis, Material consumption summary. Reports like balance sheet, Profit & Loss account, Ratio analysis, Trial Balance. Accounts books like cash/bank book. All ledgers, Group summary & vouchers. Sales, purchase & journal registers. Cost centre ^category summary, Cost centre breakup, ledger & group breakup, outstanding receivables & payables, interest receivable & payable, Statistics, Cash & Fund flow. Day book. List of Accounts, Reversing journals, optional vouchers, post-dated vouchers.

## **UNIT-IV**

Create, Alter & Display Stock Groups and Stock items, Stock item behavior using costing and market valuation method, other behavior like treating all sales as new manufacture, treating all purchases as consumed, treating all rejections inward as scrap, ignoring negative balances, Treating difference due to physical counting. Create, Alter & Display Stock categories, Create, Alter, Display simple & compound units of measures, Stock items using alternate units, Defining standard cost & selling price. Defining Rate of duty. Defining MRP, Create, Alter & Display Godowns. Allocation of items to the Godowns, All inventory voucher types and transactions, Inventory details in accounting vouchers, Defining re-order level, Transactions using tracking numbers, Use of batch-wise details in voucher. Additional cost details in vouchers, Creating Bill of material. Cost estimation, Creating Price list ^defining Price levels, invoice using Price list. Zero valued entries, Transactions in case of Different actual & billed quantities. Reports like Stock summary. Inventory books like Stock item, Group summary, Stock transfers. Physical stock register. Movement analysis, Stock group & item analysis, stock category analysis, Ageing analysis. Sales order & Purchase order book, Statement of inventory related to Godowns, categories, stock query. Reorder status. Purchase & Sales order summary, Purchase & Sales bill pending, Exception reports like negative stock & ledger, overdue receivables & payables, memorandum vouchers, optional vouchers, post-dated vouchers, reversing journals.

## **UNIT-V**

Cheque Printing, Common printing options. Different printing formats, Multi-Account printing, Dynamic- Report specific options. Creating Group company, Use of Tally vault, Using Security control & defining different security levels, Use of Tally Audit. Back-up & Restore, Splitting company data. Export & import of Data, ODBC compliance, use of E-mail, Internet publishing. Upload, web browser & online help. Rewrite data.

### Text & Reference Books:

- \* Implementing Tally 6.3 by Nadhani; 8PB Publications, ISBN: 817656494X
- \* BPB Tally 6.3 by BPB Editorial Board (Hindi) BPB Publications. ISBN 81-7656-594-6
- \* Financial Accounting with Tally , Dr. Mukti Jain , Pragma Publication