SYLLABUS FOR PGDCA COURSE

COURSE OBJECTIVES

Course Duration : 1 Year (TWO SEMESTERS)

Eligibility   : Any Graduate

There are three main objectives of this degree course. To prepare a person who can work as Assistant Programmer in an organization and to tram students to a level where they can readily compete for seats for lateral entry to advanced degree courses like MSc. (CS).

To prepare Computer Operator to operate various office packages effectively with some analytical approach and who can be directly employed by many organization To prepare Computer Assistant to Chartered Accountant

The course has been designed keeping in mind the desirable characteristics of a competent computer professional.

We identified these characteristics to be the following.

1.   Strong knowledge and skill base of the followings from core field :

•   Office Application packages.

•   Web designing

•   Programming methodology & techniques

•   LAN and Internet

•   Database user

2.   Ability to work in a team

Strict standards would be maintained, to ensure quality.

In addition, students have the option to select viz.. FoxPro/ MS Access and OOPS with C++ financial Accounting described in detail below.

Scheme For Examination for Post Graduate Diploma in Computer Applications

(PGDCA)

Semester-I

Subject Code	Subject Name	Marks
1PGDCA1	Fundamentals of Computers & Information Technology	100
1PGDCA2	Operating Systems	100
1PGDCA3	Pc Packages	100
1PGDCA4	Selective (Choose one of the Following) 1. FoxPro 2. Ms. Access	100
1PGDCA5	Computer Lab-I	100

Semester-II

Subject Code	Subject Name	Marks
2PGDCA1	Programming with Visual Basic .net	100
2PGDCA2	System Analysis & Design	100
2PGDCA3	Pc Packages	100
2PGDCA4	Selective (Choose one of the Following) 1. Oops & Prog. With C++ 2. Financial Account with Tally	100
2PGDCA5	Computer Lab- II	100
2PGDCA6	Project Work	100

General Instructions :-

- ∨ For passing the examination minimum 40% marks must be scored in each passing head individually.
- ∨ For passing the overall aggregate marks must be at least 45% in theory & practical separately.
- ∨ For the purpose of award of merit or division only the marks obtained in theory heads of all semester together shall be considered.

1PGDCA1 - FUNDAMENTAL OF COMPUTERS AND

INFORMATION TECHNOLOGY

UNIT-I

Brief history of development of computers, Computer system concepts, Computer system characteristics, Capabilities and limitations, Types of computer Generations of computers, Personal

Computer (PCs) – evolution of PCs, configurations of PCs- Pentium and Newer, PCs specifications and main characteristics. Basic components of 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, WAN, MAN .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", Galgotiya Publications.
- ∨ Alexis Leon & Mathews Leon," Fundamentals of Information technology ", Vikas Publishing House,New Delhi.

1PGDCA2- OPERATING SYSTEMS

UNIT-I

Disk operating systems (DOS)Introduction, History & version of DOS DOS basics- Physical structure of disk, drive name, FAT, file & directory structure and naming rules, booting process, DOS system files.

DOS commands : Internal -TOIR. MD, CD, RD, COPY, DEL. REN, VOL, DATE,TIME,CLS, PATH. TYPE etc.

External – CHKDSK,XCOPY, PRINT, DISKCOPY, D1SKCOMP, DOSKEY, TREE,MOVE, LABEL, APPEND. FORMAT, SORT, FDISK. BACKUP, EDIT, MODE, ATTRIB, HELP, SYS etc

Executable V/s Non executable files in DOS.

UNIT-II

Windows XP

>> Introduction to Windows XP and its features.

1.   Hardware requirements of Windows. Windows concepts, Windows -Structure, Desktop, Taskbar, Start Menu, My Pictures .My Music, working with recycle bin-restoring a deleted file, emptying the recycle bin. Managing files .folders and disk-navigating between folders .manipulating files and folders ,creating new folder .searching files and folders My computer-exploring hard disk .coping and moving files and folder from one drive to another, formatting floppy drive.

2.   Windows Accessories - Calculator, Notepad. Paint, WordPad, Character map ,paint, command prompt.

3.   Windows Explorer - -exploring hard disk .coping and moving files and folder from one drive to another, formatting floppy drive, and other Explorer facilities, burning CD.

4.   Entertainment- CD player, DVD Player, Media Player, Sound Recorder. Volume Control, movie maker

UN IT-III

Advanced Features of windows XP

∨ Managing Hardware & Software - Installation of Hardware & Software, Using Scanner web camera, printers sharing of printers

∨ System Tools - Backup, Character map. Clipboard Viewer, Disk Defragmenter, Drive Space, Scandisk, System Information, System Monitor, Drive converter (FAT 32) ,disk cleanup ,using windows update.

- ∨ Communication - Dial up Networking, Direct Cable Connection, Hyper Terminal, Phone Dial .Browsing the Web with internet explorer .communication through outlook express

- ∨ Multiple Users Features of Windows. Creating and deleting user, changing user password, etc

- ∨ Accessibility Features of Windows.-Sharing Information between Programs ,sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers

- Understanding OLE - Embed/Link Using Cut and Paste a Embed/Link Using Insert Object

- Manage Embedded/Linked Object

UNIT - IV

- Ø Linux
- Ø History & Features of Linux
- Ø Linux Structure
- Ø File system of Linux
- Ø Hardware requirements of Linux
- Ø Various flavors of Linux
- Ø Program & Process
- Ø Process creation and process identifiers
- Ø Functions of profile and login files in Linux
- Ø Linux kernel

UNIT-V

Multi-user features of Linux

Login and logout from Linux system

Linux commands - be, cal, cat, cd, chgrp, chma fclear, cmp, copy, date, find, ps, kill, ls, mail, mkdir, rmdir, tty, wc, who, whois, grep, write, telnet.

Pipeline concepts

Using floppy and cdrom in Linux.

vi editor

TEXT & REFERENCE BOOKS :

- Ø DOS Quick reference .Rajeev Mathur, Galgotia Publications
- Ø Linux Complete by BPB Publications
- Ø Peter Norton Complete Guide to Linux by Peter Norton, Techmedia Publications
- Ø Level Module M 1.1 Information technology by Khanna Book Publications, New Delhi
- Ø Windows XP Complete BPB Publications

1PGDCA3 - PC PACKAGES

NOTE:-

1.   Theory and Practical of this course is based on at least Windows XP and MS Office XP Version, newer versions can also be used for performing practical in Lab.

2.   Demonstration of Star Office and Open Office must be given in the classroom, comparison can be asked In the theory & practical exam

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 MS- Word; 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

UNIT-II

Advanced Features of MS-Word: Spell Check. Treasures. Find & Replace; Headers & Footers ; Inserting - Page Number, Pictures, Files, Auto texts, Symbols etc.; Working with Columns, Tabs & Indents; Creation Working with Tables including conversions to and from text; Margins & Space managejpen1^ in Document; Adding References and Graphics; Mail Merge. Envelops & Mailing Labels.

UNIT-III

MS Excel: Introduction and o(use; Working with MS Excel.; concepts of Workbook &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 Worksheet; 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 & Different Working with Notes, Handouts, Columns & Lists; Adding Graphics W 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
- ∨ T. Tools and Applications, A. Mansoor, Pragya Publications

1PGDCA4[A] – 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

VIE WINING ANI5 EDITING DATA

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 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, Preview Pointing

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 Vs Array

Saving and Restoring Memory Variables^

?/??/'??? Commands Time & Date Functions and Command Date Arithmetic Operations Convert Defining Functions keys.

UNIT - IV

Programming with FoxPro

Concepts of FoxPro Commands file, Modify Commands

Conditioning , Branching and Looping within Program files with Do-

While Enddo & Endif, Scan-Endscan, For - Endfor, Docase-

Endcase- text, Executing Commands from other

command files, Macro Substitution

Error conditions and program debugging aids

Common Error Massages

,Debugging techniques and commands

Unit-V

Multiple data files

Concept of Multiple Database Files - Using multiple database files Relation 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. FoxDoc 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

1PGDCA4[B] -MS ACCESS

UNIT- I

Introduction to database -What is a Database ,Why use a Relational Database, Overview of database design – Data Normalization(Determining tables, Determining Fields, Determining Relationships Integrity Rules (Primary/Foreign Key, One-to-Many, Many-to-Many, One-to-One) Introduction to MS Access (Objects,

Navigation).

UNIT -II

Create a Table in MS Access -Data Types, Field Properties , Fields: names, types, properties—default values, format, caption, validation rules Data Entry Add record delete recode and edit text Sort, find/replace, filter/select, re-arrange columns, freeze columns . Edit a Tables- copy, delete, import, modify table structure find replace.

UNIT-III

Setting up Relationships- Define relationships, odd a relationship, set a rule for Referential Integrity, change the join type, delete a relationship, save relationship Queries fir. Filter -difference between queries and filter .filter using multiple fields AND,OR .advance filter Queries create Query with one table .fiend record with select query, find duplicate record with query .find unmatched record with query, run query .save and change query.

UNIT IV

Introduction to Forms Types of Basic Forms: Columnar. Tabular, Datasheet, Main/Sub forms, add headers and footers, add fields to form, add text to form use label option button Checkbox .combo box, list box Forms Wizard, Create Template.

UNIT V

Introduction to Reports ,Types of Basic Reports Single Column, Tabular Report Groups/Total, single Table Report multi table report preview report print report. Create Template Labels, Wizard

- Ms Office XP complete BPB publication ISBN 81-7656-564-4

- Ms Access 2002 fast &easy by Faithe 'Wempen PHI .ISBN 81-203-1893-5

2 PGDC A1 -PROGRAMMING WITH VISUAL BASIC.NET

UNIT-I

Introduction to .NET, .NET framework features & architecture, CLR, Common Type System, MSIL, Assemblies and class libraries. Introduction to visual Studio Project basics, types of project in .Net, IDE of VB.NET- Menu bar, Toolbar, Solution Explorer, Toolbox, Properties Window Form Designer, Output Window, Object Browser.

The environment tab, format tab, general tab, docking tab. visual Development & event drive Programming - Methods and events.

UNIT-II

The VB.NET Language- Variables -Declaring variables, Data Type of variables, Forcing variables declarations, Scope & lifetime of a Wimble, Constants, Arrays, types of array, control array, Collections, Subroutines, Functions, Passing variable Number of Argument Optional Argument, Returning value from function.

Control flow statements: conditional statement, loop statement. Msg box & Input box.

UNIT - III

Working with Forms : Loading, showing and hiding forms, controlling One form within another.

GUI Programming with Windows Form: Textbox, Label, Button, List box, Combo box, Checkbox, Picture Box, Radio Button, Panel, scroll bar, Timer, List View, Tree View, toolbar, Status Bar .There Properties, Methods and events. Open File Dialog, Save File Dialog, Font Dialog, Color Dialog, Print Dialog. Link Label. Designing menus : Context Menus , access & shortcut keys.

UNIT-IV

Object oriented Programming: Classes & objects, fields Properties, Methods & Events, constructor, inheritance. Access Specifies: Public Private, Projected. Overloading, My Base & My class keywords. Overview of OLE, Accessing the WIN32 API from VB.NET. COM technology, advantages of COM+, COM & .NET, Create User control, register User Control, access com components in .net application.

UNIT-V

Database programming with ADO.NET - Overview of ADO, from ADO to ADO.NET, Accessing Data using Server Explorer. Creating Connection, Command, Data Adapter and Data Set with OLEDB and SQLDB. Display *Data on data bound controls, display data on data grid.

Text & reference books :-

- ∨ VB.NET PROGRAMMING BLACK BOOK BY STEVEN HOLZNER -DREAMTECH PUBLICATIONS
- ∨ MASTERING VB.NET BY EVANGELOS PETROUTSOS- BPB PUBLICATIONS
- ∨ INTRODUCTION TO .NET FRAME WORK-WORX PUBLICATIONS
- ∨ MSDN. MICROSOFT. COM/NET/
- ∨ WWW.GOTDOTNET.COM

2PGDCA2 - INTERNET & E-COMMERCE

UNIT-I

Internet - Evolution, Protocols interface Concepts. Internet Vs Intranet, Growth of Internet and ISP Connectivity - Dial-up, Leased line, VSAT etc., URLs, Domain Names Portals, Application.

E-MAIL – Concepts POP WEB Based E-mail ,merits, address, Basics of Sending and receiving, E-mail Protocols, Mailing List. Free E- mail services.

INTERNET protocols - Data Transmission Protocols, Client/Server Architecture & its Characteristics, FTP & its usages. Telnet Concept, Remote Lodging, Protocols, Terminal Emulation, Massage Board, Internet chatting - Voice chat, text chat.

UNIT-II

World wide web (www) - History, Working, Web Browsers, Its functions, Concept of Search Engines, Searching the Web, HTTP, URLs, Web Servers, Web protocols.

Web publishing - Concepts, Domain name Registration, Space on Host Server for Web site, HTML, Design tools. HTML editors , Image editors, Issues in Web site creations & Maintenance, FTP software for upload web site.

UNIT-III

Html - Concepts of Hypertext, Versions of HTML, Elements of HTML syntax, Head & Body Sections, Building HTML documents, Inserting texts, Images, Hyperlinks, Backgrounds and Color controls, Different

HTML tags, Table layout and presentation, Use of font size & Attributes, List types and its tags, Use of Frames and Forms in web pages. Introduction to WYSIWYG Design tools for HTML, Overview of MS

FrontPage, Macromedia Dream weaver, and other popular HTML editors, designing web sites using MS FrontPage (using at least FrontPage 2000)

UNIT IV

JavaScript Overview, syntax & conventions. Variables, Expressions, Branching & Looping statements, Functions,

Arrays Objects, Events & Document Object Model - on Click, on Mouse Over, onSubmit, onFocus, onChange, onBlur. onLoad, onUnload.Alerts, Prompts & Confirms.

UNIT - V

E - Commerce An introductions, Concepts, Advantages and disadvantages, Technology in E- Commerce, Internet & E-business, Applications, Feasibility & various constraints. E-transition challenges for Indian corporate. Electronic Payment Systems: Introduction, Types of Electronic Payment Systems, Digital Token-Based Electronic Payment Systems, Smart Cards and Electronic Payment Systems, Credit Card-Based Electronic Payment Systems, Risk and Electronic Payment Systems.

TEXT & REFERENCE BOOKS :

- ∨ Internet and Web Design Made Easier By A. Mansoorf Pragya Publications, Matura
- ∨ O level Module - M 1.2 - Internet & web page Designing by V.K.Jain - BPB Publications.
- ∨ E-Commerce An Indian Perspective (Second Edition) by P.T. Joseph, S.J. Presentence-Hall of India
- ∨ Internet for Everyone - Alexis leon' and Mathews Leon, Vikas Publishing House Pvt. Ltd . New Delhi
- ∨ Internet for Dummies – Pustak Mahal , new Delhi
- ∨ A Beginner's   Guide to HTML available at:

http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimerAll.html

Introduction to JavaScript - available at www, mcu.ac. in / Javascriptguide.pdf

2PGDCA3 - SYSTEM ANALYSIS AND DESIGN

UNIT -I

The System Concept, Characteristics, Elements and Types of a system.

The System Development Life Cycle, Considerations for candidate systems, Prototyping. The Role of System analyst

UNIT-II

System planning and Initial Investigation Information Gathering, information gathering Tools.

Structured Analysis, The Tools of Structured Analysis (DFD, Data Dictionary Decision tree and Pseudo Codes, Decision Tables), pros and cons each tool.

System performance definition, description of outputs, Feasibility study Cost/ Benefit Analysis : Data Analysis, Cost/Benefit Analysis ,The System proposal.

UNIT-III

The Process and Stages of System Design : Design methodologies, development activities. Input design, output design, forms design, types of forms, basics of form design, layout considerations and forms control.

UNIT - IV

File structure, file organization, objectives of database, data structure. System Testing and Quality Assurance, Why system testing, what do we test for, the test plan quality assurance, trends in testing, role of data processing auditor. Training and Documentation.

UNIT-V

Implementing and software maintenance, Conversion, combating resistance to change, post implementation review, software maintenance. Hardware/Software Selection and the Computer Contract, suppliers,

procedure for hardware/software selection, financial considerations in selection, the computer contract.

System Security, Disaster Recovery Planning

NOTE :- Various real life case studies and examples in every stages of system analysis and design may be taken.

TEXT and REFERBNCE BOOKS :

- ∨ System Analysis and Design, Elias M. Awad, Galgotia Publications (P) Ltd.
- ∨ System Analysis and Design. International Ed., Perry Edwards, McGraw Hill Publications.
- ∨ Information Technology fit Computer Applications, by V.K.Kapoor, Sultan Chand & Sons, New Delhi.

2PGDCA4[A] - OOPS & PROGRAMMING WITH C++

UNIT -I

Principles of object-oriented programming Object-Oriented Programming   Paradigm, Basic Concepts of Object-Object Oriented Programming, Benefits of OOPs, Object-Oriented Languages, Applications of OOP, "C+-{Statements, Class, Structure of C++ Program, Creating the Source File, Compiling and Linking.

UNIT-II

Tokens, expressions and control structures Introduction, Tokens , Keywords, Identifiers, 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, Manipulators, Type Cast Operator, Expressions and Implicit Conversions, Operator Precedence, Control Structures..

UNIT-III

Classes and objects Specifying a Class, Defining Member Functions, Making an Outside Function Inline, Nesting of Member Functions, Private Member Function, Arrays within a Class, Memory Allocation for Objects, Static Data Member, Static Member Functions, Arrays of Objects, Object as Function Arguments.

Constructors and destructors

Introduction, Constructors, Parameterized Constructors, Multiple Constructors with Default Arguments, Dynamic Initialization of Objects, Copy Constructors, Dynamic Constructors, Destructor.

Functions in C++

The Main Function, Function Prototyping, Call by Reference, Return by Reference, Inline Functions, Default Argument, Const. Arguments, Function Overloading, Friend and Virtual Function.

UNIT – IV

Operator overloading and type conversions Introduction, Defining Operator Overloading, Overloading Unary Operators, Overloading Binary Operators Using Friends, Manipulation of strings using Operators, Rules for Overloading Operators, Type conversions.

UNIT-V

INHERITANCE: EXTENDING CLASSES

Introduction, Defining Derived Classes, Single Inheritance, Making a Private Member

Inheritable, Multilevel Inheritance, Multiple Inheritance, Hierarchical I Inheritance, Hybrid Inheritance.

Pointers, virtual functions and polymorphism Compile time Polymorphism, run time polymorphism, Pointers to Objects, This Pointer, Pointers to Derived Classes, Virtual Functions & Pure Virtual Functions.

TEXT & REFERENCE BOOKS :

Object Oriented Programming with C+ + by E.Balaguruswami, TMH Publications ISBN 0-07-462038-x

Object Oriented Programming in C++ by Nabajyoti Barakati SAMS Till Pvt. Ltd

2PGDCA4[B] - FINANCIAL ACCOUNTING WITH TALLY

UNIT I

Basic Concepts of Accounting, - Financial Statements, Financial Statement Analysis, Cost Center Basic concepts of Inventory.

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 Futures, Configuration.

Unit-II

Create Alter & Display Groups and Ledgers, All 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 centre 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 items 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, alternate units, Defining standard cost & selling of duty, Defining MRP, Create, Alter & Display items to the Godowns, All inventory voucher type Inventory details in accounting vouchers,

Defining re-order level, Transactions Inventory 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 & 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 Godown , 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 voucher receiving 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.

Backup & Restore, Splitting company data, Export & import of Data, ODBC compliance, use of E-mail, Internet publishing, Upload, web browser & online help, Re-write data.

TEXT & REFERENCE BOOKS :

- ∨ Implementing Tally 6.3 by Nadhani; BPB Publications, ISBN: 817656494X
- ∨ BPB Tally 6.3 by BPB Editorial Board (Hindi) BPB Publications , ISBN 81-7656-594-6

2PGDCA6 PROJECT WORK