DETAILED SYLLABUS
POST GRADUATE DIPLOMA IN COMPUTER APPLICATIONS
(PGDCA)
(EFFECTIVE FROM JULY 2011)

Department of Computer Applications

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SCHEME FOR
POST GRADUATE DIPLOMA IN COMPUTER APPLICATIONS
(PGDCA)
(Effective From July 2011 Session)

SEMESTER -I

Subject Code	Subject Name	Scheme			Theory Paper	Internal Evaluation	Practical Exams	Total Marks
		L	T	P				
1PGDCA1	Fundamentals of Computers & Information Technology	4			80	20		100
1PGDCA2	Introduction to Operating Systems (Dos, Windows, Linux)	4	1	3	80	20		100
1PGDCA3	PC Packages	4		3	80	20	25	125
1PGDCA4(A) 1PGDCA4(B)	Elective - 1 Foxpro MS-Access	4	1	3	80	20	25	125
							Semester Total	450

(*L-Lecture, T-Tutorial, P-Practical)

SEMESTER –II

Subject Code	Subject Name	Scheme			Theory Paper	Internal Evaluation	Practical Exams	Total Marks
		L	T	P				
2PGDCA1	System Analysis and Design	4			80	20		100
2PGDCA2	Programming with Visual Basic.NET	4	1	3	80	20	25	125
2PGDCA3	Internet & E-Commerce	4		3	80	20		100
2PGDCA4(A) 2PGDCA4(B)	Elective - 2 OOPs & Programming with C++ Financial Accounting with Tally	4	1	3	80	20	25	125
2PGDCA5	Project Work	4						100
							Semester Total	550

General Instructions:
1. For passing the subject examination minimum 40% marks must be separately scored in Theory Paper, Practical Exams and Internal Evaluation in the subject.
2. For passing the semester, minimum aggregate marks must be 45% in the semester.

Course   : PGDCA   Semester: I
Sub Code : 1PGDCA1   Subject Name : Fundamentals of Computers & Information Technology

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I Brief History of Development of Computers, Computer System Concepts, Computer System Characteristics, Capabilities And Limitations, Types of Computers, Basic Components of A Computer System - Control Unit, ALU, Input/output Functions and Characteristics, Memory RAM, ROM, EPROM, PROM and other types of Memory.	8					8	
UNIT–II Input/Output & Storage Units-: Keyboard, Mouse, Trackball, Joystick, Digitizing tablet, canners, Digital Camera, MICR, OCR, OMR, Barcode 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,	8					8	
UNIT–III Printers And Its Types -Dot Matrix, Inkjet, Laser, Plotter, Sound Card And Speakers, Storage Fundamentals - Primary Vs Secondary Data Storage And Retrieval Methods - Sequential, Direct And Index Sequential, Various Storage Devices - Magnetic Tape, Magnetic Disks, Hard Disk Drives, Floppy Disks ,Optical Disks, Flash Drives Video Disk, MMC Memory Cards, Physical Structure of Floppy & Hard Disk, Drive Naming Conventions In PC.	8					8	
UNIT–IV Use of Communication and IT, Communication Process, Communication Types- Simplex, Half Duplex, Full Duplex, Serial And Parallel Communication, Types Of Network - LAN, W AN, MAN ,Internet, Topologies of LAN - Ring, Bus, Star, Mesh And Tree Topologies, Components of LAN -Media, , World Wide Web and Applications and Internet Services.	8					8	
UNIT–V Software and Its Need, Types of Software - System Software, Application Software, System Software - Operating System, Utility Program, Programming Languages, Assemblers, Compilers And Interpreter, 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, Virus-Working Principles, Types of Viruses, Virus Detection and Prevention Methods .	8					8	
TEXT & REFERENCE BOOKS: • *COMPUTERS TODAY, BY S.K BASANDRA, GALGOTIA PUBLICATIONS.* • *FUNDAMENTALS OF INFORMATION TECHNOLOGY ALEXIS LEON & MATHEWS LEON, , VIKAS PUBLISHING* • *DOS QUICK REFERENCE RAJEEV MATHUR, , GALGOTIA PUBLICATIONS*							

Course : **PGDCA** **Semester: I**
Sub Code :1PGDCA2 **Subject Name : Introduction to Operating Systems (DOS, Windows, Linux)**

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I **DISK OPERATING SYSTEM (DOS):** Introduction, History & Versions of DOS, DOS Basics - Physical Structure of Disk, Drive Name, FAT, File and Directory Structure and Naming Rules, Booting Process, DOS System Files. DOS Commands: Internal - DIR, MD, CD, RD, COPY, COPY CON, DEL,REN VOL, DATE, TIME, CLS, PATH, TYPE, VER etc. External - CHKDSK, XCOPY, PRINT, DISKCOPY, DOSKEY, TREE, MOVE, LABEL, FORMAT, SORT, FDISK, BACKUP, EDIT, MODE, ATTIRIB, HELP, SYS etc, Executable V/s Non Executable Files in DOS.	8		6			14	
UNIT–II **WINDOWS XP:** Introduction to Windows XP and its Features, Hardware Requirements of Windows. Windows Concepts, Windows Structure, Desktop, Taskbar, Start Menu, My Pictures, My Music, My Documents, 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, Copying and Moving Files and Folder from One Drive to Another, Formatting Floppy Drive, Windows Explorer and its Facilities, Using Floppy, CD, DVD, Pen Drive, Burning CD. Windows Accessories - Calculator, Notepad, Paint, WordPad, Command Prompt. Entertainment- Media Players, Sound Recorder, Volume Control, Movie Maker.	8		6			14	
UNIT–III **ADVANCED FEATURES OF WINDOWS XP:** Managing Hardware & Software - Installation of Hardware & Software, Using Scanner Web Camera, Printers. System Tools - Backup, Character Map, Clipboard Viewer, Disk Defragmenter, Drive Space, Scandisk, System Information, System Monitor, Disk Cleanup, Using Windows Update. Browsing the Web with Internet Explorer, Multiple User Features of Windows, Creating and Deleting User, Changing User Password, etc. Accessibility Features of Windows - Sharing Folders and Drives, Browsing the Entire Network, Using Shared Printers. OLE - Embed/Link Using Cut and Paste an Embed/ Link, Using Insert Object Manage Embedded/Linked Object.	8		6			14	
UNIT–IV **LINUX:** History & Features of Linux, Linux Architecture, File System of Linux, Hardware Requirements of Linux, Various flavors of Linux, Linux Standard Directories, Functions of Profile and Login Files in Linux, Linux Kernel,	8		6			14	
UNIT–V **WORKING WITH LINUX:** KDE & Gnome Graphical Interfaces, Various Types of Shell Available in Linux, Multi-User Features of Linux, Login and Logout from Linux System, Linux commands - bc, cal, cat, cd, clear, cmp, cp, mv, date, find, ls, pwd, mkdir, more, rm, rmdir, chgrp, chmod, chown, tty, wc, who, whois, grep, telnet, vi editor, Using Floppy, CD-ROM and Pen Drive in Linux, Permissions and Ownerships,	8		6			14	
TEXT & REFERENCE BOOKS: • *DOS QUICK REFERENCE BY RAJEEV MATHUR, GALGOTIA PUBLICATIONS LINUX COMPLETE BY BPB PUBLICATIONS* • *PETER NORTON COMPLETE GUIDE TO LINUX BY PETER NORTON, TECHMEDIA PUBLICATIONS* • *LEVEL MODULE M 1.1 INFORMATION TECHNOLOGY BY KHANNA BOOK PUBLICATIONS, NEW DELHI* • *WINDOWS XP COMPLETE REFERENCE, BPB PUBLICATION*							

Course   : PGDCA
Sub Code :1PGDCA3

Semester: I
Subject Name : PC Packages

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I **Office Packages:** Office activates and their software requirements, 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	8		6			14	
UNIT–II **Advanced Features of MS-Word:** Spell Check, Thesaurus, Find & Replace; Headers & Footers, Inserting - Page Numbers, Pictures, Files, Autotexts, 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. Importing and exporting to and from various formats.	8		6			14	
UNIT–III **MS Excel:** Introduction and area of use, Working with MS Excel, Toolbars, Menus and Keyboard Shortcuts, 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, Cell Formatting including Borders & Shading,	8		6			14	
UNIT–IV **Advanced Features of MS Excel:** Multiple Worksheets: Concept, Creating and Using Multiple Worksheets; Use of Formulas, Calculations & Functions, Various types of Functions, Cell Referencing, Absolute and Relative Addressing, Working with Different Chart Types, Chart Wizard, Printing of Workbook & Worksheets with various options, Database: Creation, Sorting, Query and Filtering a Database; Creating and Using Macros;	8		6			14	
UNIT–V **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.	8		6			14	
TEXT & REFERENCE BOOKS: • *WINDOWS XP COMPLETE REFERENCE. BPB PUBLICATIONS* • *MS OFFICE XP COMPLETE BPB PUBLICATION* • *MS WINDOWS XP HOME EDITION COMPLETE, BPB PUBLICATION.* • *JOE HABRAKEN, MICROSOFT OFFICE 2000, 8 IN 1, BY, PRENTICE HALL OF INDIA* • *I.T .TOOLS AND APPLICATIONS, BY A. MANSOOR, PRAGYA PUBLICATIONS, MATURA*							

Course : **PGDCA**   **Semeste**r**: I**
Sub Code **:1PGDCA4(A)**   **Subject Name : (A)Foxpro (Elective - 1)**

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I **FoxPro -** The RDBMS for PC, Concept of database, 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 ,Data Displaying Commands - LIST, DISPLAY, LOCATE, EDIT, CHANGE, BROWSE, REPLACE, DELETE, RECALL, PACK (All Commands with various Options)	8		6			14	
UNIT–II File utilities in FoxPro MODIFY STRUCTURE, MEMO FIELD AND FILE UTILITIES - DISPLAY DIRECTORY, COPY, DELETE, RENAME. 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, FoxPro Report - its creation, features & Utilities, Preview, Printing Custom Report, grouping & Sub grouping. ,FoxPro Label - Designing & Printing	8		6			14	
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 Commands, Date Arithmetic , Converting Defining Function Keys ,Keyboard Macros - Creating and Using Mathematical Commands ,Functions ,Arithmetic Operations, Mathematical Functions, Mathematical ,Commands, Statistical Functions.	8		6			14	
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, Docase Endcase, Text - Endtext, Executing Commands from other command files, Macro Substitution ,Common Error Massages ,Debugging techniques and commands .	8		6			14	
UNIT–V Concept of Multiple Database Files - Using multiple database files ,Relationing 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, @LEDIT, @_SAY_GET_READ, Creating Box & Lines, User Define Functions, Custom Screen Designing and their Use, FoxDoc for documentation	8		6			14	
TEXT & REFERENCE BOOKS: • *FOXPRO MADE SIMPLE BY R.K T AXALI, BPB PUBLICATIONS* • *MASTERING FOXPRO 2.5 BPB PUBLICATIONS* • *FOXPRO 2. 6 FOR DUMMIES - PUSTAK MAHAL*							

Course : PGDCA   **Semeste**r**: I**
Sub Code :1PGDCA4(B)   **Subject Name : (B) MS-Access (Elective - 1)**

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I **Basics of RDBMS** 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).	8	6				14	
UNIT–II **Tables in Database** 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 record and edit text, Sort, find/replace, filter/ select, rearrange columns, freeze columns. Edit a Tables- copy, delete, import, modify table structure, find, replace.	8	6				14	
UNIT–III **Working with Query** Setting up Relationships- Define relationships, add a relationship, set a rule for Referential Integrity, change the join type, delete a relationship, save relationship Queries & Filter - difference between queries and filter, filter using multiple fields AND, OR , advance filter Queries, create Query with one table, find record with select query, find duplicate record with query, find unmatched record with query, run query, save and change query.	8	6				14	
UNIT–IV **Working with Forms** Introduction to Forms Types of Basic Forms: Columnar, Tabular, Datasheet, Main/Subforms, add headers and footers, add fields to form,add text to form use label option button, check box, combo box, list box Forms Wizard, Create Template.	8	6				14	
UNIT–V **Working with Reports** Introduction to Reports , Types of Basic Reports: Single Column, Tabular Report Groups/Total, single table report, multi table report preview report print report, Creating Reports and Labels, Wizard.	8	6				14	

TEXT & REFERENCE BOOKS:
  • *MS OFFICE XP COMPLETE BPB PUBLICATION ISBN 8 1-7656-564-4*
  • *MS ACCESS FAST & EASY BY FAITHE WEMPEN PHI . ISBN 81- 203-1893-5*
  • *MICROSOFT® ACCESS® STEP BY STEP BY COX & LAMBERT PHI LEARNING ISBN PB 9788120342019*							

Course : **PGDCA**   **Semester: II**
Sub Code :2PGDCA1   **Subject Name : System Analysis and Design**

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I System Concept: Definition, Characteristics, Elements of system, Physical and abstract system, open and closed system, ,System Development Life Cycle: Various phases of system development, Considerations for system planning and control for system success. System Planning.	8					8	
UNIT–II Initial Investigation: Determining Users Requirements and Analysis, Fact Finding Process and Techniques. Feasibility Study: Determination of Feasibility Study, Technical, Operational & Economic Feasibilities, Data Analysis, Cost and Benefit Analysis.	8					8	
UNIT–III Tools of Structured Analysis: Data Dictionary, Form, Gantt Charts, System Model, Pseudo Codes, Flow Chart System Flow Chart, Decision Tree, Decision Tables, Input/ Output and Form Design: Input and Output Form Design Methodologies, Menu, Screen Design, Layout Consideration.	8					8	
UNIT–IV User Manual, Programming Manual, Programming Specifications, Operator Manual. System Testing & Quality: System Testing and Quality Assurance, Software Maintenance. System Security: Data Security, Disaster/ Recovery Threat and Risk Analysis.	8					8	
UNIT–V Organization of EDP: Introduction. Job Responsibilities & duties of EDP Personnel's- EDP manager, System Analyst, Programmers, Operators etc. Essential features in EDP.	8					8	
TEXT & REFERENCE BOOKS: • *SYSTEM ANALYSIS & DESIGN BY V K JAM, DREAMTECH PRESS* • *MODERN SYSTEM ANALYSIS &DESIGN BY A HOFFER, F GEORGE, S VALACIAH LOW PRICED EDN. PEARSON EDUCATION.* • *INFORMATION T ECHNOLOGY & COMPUTER APPLICATIONS BY VK.KAPOOR SULTAN CHAND& SONS, NEW DELHI.*							

Course : PGDCA
Sub Code : 2PGDCA2

Semester**: II**
Subject Name : Programming with Visual Basic.Net

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
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: Editor tab, format tab, general tab, docking tab. visual development & event driven Programming -Methods and events.	8	6				14	
UNIT–II The VB.NET Language- Variables -Declaring variables, Data Type of variables, Forcing variables declarations, Scope & lifetime of a variable, 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. Msgbox & Inputbox.	8	6				14	
UNIT–III Working with Forms: Loading, showing and hiding forms, controlling One form within another.GUI Programming with Windows Form: Textbox, Label, Button, Listbox, Combobox, Checkbox, PictureBox, Radio Button, Panel, Scroll bar, Timer, List View, Tree View, Toolbar, Status Bar. Their Properties, Methods and Events. OpenFile Dilog, SaveFileDialog, FontDialog, ColorDialog, Print Dialog. LinkLabel. Designing menus : Context Menu, access & shortcut keys.	8	6				14	
UNIT–IV Object Oriented Programming: Classes & objects, fields properties Methods & Events, constructor, inheritance. Access Specifiers: Public, Private, Protected. Overloading, My Base & My class keywords. Overview of OLE.	8	6				14	
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.	8	6				14	
TEXT & REFERENCE BOOKS: • *VB.NET PROGRAMMING BLACK BOOK BY STEVEN HOLZNER-* • *DREAMTECH PUBLICATIONS* • *MASTERING VB.NET BY EVANGELOS PETROUTSOS - BPB PUBLICATIONS* • *INTRODUCTION TO.NET FRAMEWORK -WORX PUBLICATION* • *MSDN. MICROSOFT. COM/ NET/* • *WWW.GOTDOTNET.COM*							

Course : **PGDCA**
Sub Code : **2PGDCA3**

Semester: **II**
Subject Name : Internet & E-Commerce

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I Internet - Evolution, Protocols, Interface Concepts, Internet Vs Intranet, Growth of Internet, ISP, Connectivity - Dial-up, Leased line, VSAT etc., URLs, Domain names, Portals, Application. E-MAIL - Basics of Sending & Receiving, Free Email services. FTP & its usages. Telnet Concept, Internet chatting - Voice chat, Text chat.	8	6				14	
UNIT–II Word Wide Web (www) - History, Working, Web Browsers, Its functions, Concept of Search Engines, Searching the Web, HTTP, URLs, Web Servers, Web Protocols. Space on Host Server for Website, HTML, Design tools, HTML editors , Image editors.	8	6				14	
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.	8	6				14	
UNIT–IV JavaScript Overview, syntax & conventions. Variables, Expressions, Branching & Looping statements, Functions, Arrays Objects, Events & Document Object Model - onClick, onMouseOver, on Submit, on Focus, on Change, onBlur. onLoad, onUnload. Alerts, Prompts & Confirms.	8	6				14	
UNIT–V E - Commerce an Introductions, Concepts, Advantages and Disadvantages, Internet & E-Business, Applications, Electronic Payment Systems: Introduction, Types of Electronic Payment Systems, , Smart Cards and Credit Card-Based Payment Systems, Introduction E-Governance and its applications , Various Sites .	8	6				14	
TEXT & REFERENCE BOOKS: • *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. PRESENTICE-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 BEGINNERS GUIDE TO HTML AVAILABLE AT: HTTP://WWW.NCSA.UIUC.EDU/GENERAL/INTERNET/WWWL HTMLPRIMERALL. HTML* • *INTRODUCTION TO JAVASCRIPT AVAILABLE AT - WWW. MCU. AC. IN/JAVASCRIPTGUIDE.PDF*							

Course   : **PGDCA**   **Semeste**r**: II**
Sub Code : **2PGDCA4(A)**   **Subject Name : (A) OOPs & Programming with C++ (Elective - 2)**

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I Principles of Object-oriented Programming, Object-Oriented Programming Paradigm, Basic Concepts of 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.	8	6				14	
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 Initialisation of Variables, Reference Variables, Operators in C++, Scope Resolution Operator, Member Dereferencing Operators, Manipulators, Type Cast Operator, Expressions and Implicit Conversions, Operator Precedence, ControlStructures.	8	6				14	
UNIT–III 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 Initialisation of Objects, Copy Constructors, Dynamic Constructors, Destructor.	8	6				14	
UNIT–IV 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. Operator Overloading - introduction, methods, binary versus unary operators Inheritance: Extending Classes Introduction, Defining Derived Classes, Single Inheritance, Making a Private Member Inheritable, Multilevel Inheritance, Multiple Inheritance, Hierarchical Inheritance, Hybrid Inheritance.	8	6				14	
UNIT–V 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.	8	6				14	
TEXT & REFERENCE BOOKS: • *OBJECT ORIENTED PROGRAMMING WITH C++ BY E.BALAGURUSWAMI,* • *TMH PUBLICATIONS ISBN O-07-462038-X* • *OBJECT ORIENTED PROGRAMMING IN C++ BY NABAJYOTI BARAKATI* • *SAMS PHI PVT. LTD* • *OBJECT ORIENTED PROGRAMMING IN C++ BY R.K. SHUKLA, WILLEY*							

Course : PGDCA   **Semeste**r: **II**
Sub Code : 2PGDCA4(B)   **Subject Name : (B) Financial Accounting with Tally**
                                                    (Elective - 2)

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I	8	6				14	
1. Basic Concepts of Accounting, Financial Statements, Financial Statement Analysis, Cost Centre, Basic concepts of Inventory							
2. 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, and Configuration.							
UNIT–II	8	6				14	

1. Create, Alter & Display
    a. Groups and Ledgers
    b. All accounting voucher types							

2. Accounting Voucher transactions, Account Invoice transactions, Excise Invoice, Export Invoice, Transactions using Bill-wise details.							
3. 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.							
4. Create, Alter & Delete Budgets for groups, ledgers & cost centre, Defining credit limit & credit period, Display Budgets & variances, Create, Alter & Delete a scenario.							
5. Journal Transactions, payment voucher, Godown summary							
UNIT–III	8	6				14	
1. Reports like balance sheet, Profit & Loss account, Ratio analysis Trial Balance.							
2. Accounts books like cash / bank book, All Ledgers Group summary & vouchers, Sales, purchase & journal registers.							
3. 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	8	6				14	
1. Create, Alter & Display Stock Groups and Stock Items,							
2. All inventory voucher types and transactions Inventory details in accounting vouchers.							
3. 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 journal							
UNIT–V	8	6				14	
1. Cheque Printing, Common printing options, Different printing formats, Multi-Account printing, Dynamic-Report specific options.							
2. Creating Group Company, Use of Tally vault, Using Security control & defining different security levels, Use of Tally Audit.							
3. Back-up & 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; ISBN: 81 7656494X BPB PUBLICATIONS,*
- *BPB TALLY 6.3 BY BPB EDITORIAL BOARD (HINDI) BPB PUBLICATIONS ISBN81 - 7656-594-6*

INTERNAL EVALUATION

For internal evaluation wherever required as per scheme, the concerned faculty members must keep a detailed record of activities performed. At least 2 tests must be conducted evenly distributed in the semester and syllabus, each having a weightage of 25% (in case more than 2 tests conducted, best 2 performance may be considered). Further the entire semester attendance be evaluated for 25% weightage and fully a comprehensive subject viva on the assignments (at least two) shall have a weightage of 25%.

The record for every students must be maintained at least for 6 months after the end of examination, foil/counter foil must be submitted to the Examination Section before the start of theory examination. The format (for 20 marks weightage) is attached herewith.

1. Subject code
2. Subject name
3. Year
4. Study Institute code
5. Name & address of Study Institute
6. Name of Class Coordinator

Roll No.	Enrollment No.	Test-1 Marks MM-5	Test-2 Marks MM-5	Attendance MM-5	Viva MM-5	Total MM-20

Signature of Class Coordinator

Signature of Head of Institute