

PROGRAMME GUIDE

DISTANCE EDUCATION PROGRAMMES

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION (PGDCA)

- **Scheme of Examination**
- **Detailed Syllabus**



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POST GRADUATE DIPLOMA IN COMPUTER APPLICATIONS (PGDCA)

Duration : 12 Months Eligibility : Graduate in any Subject

New Proposed Scheme of Examination

Course Code	Name of the Course	Credit	Total Marks	Theory		Practical/Viva Marks		Assignments	
				Max	Min	Max	Min	Max	Min
FIRST SEMESTER									
1PGDCA1	Fundamentals of Computers & Information Technology	3	100	70	25	-	-	30	11
1PGDCA2	Windows & MS Office	3	150	70	25	50	18	30	11
1PGDCA3	Programming Methodology & Programming in Foxpro	3	150	70	25	50	18	30	11
1PGDCA4	Computer Networks & Internet	3	100	70	25	-	-	30	11
1PGDCA5	Communication Skills & Personality Development	2	100	70	25	-	-	30	11
Total		14	600	350	140	100	40	150	60
SECOND SEMESTER									
2PGDCA1	Objects Oriented Programming with C++	3	150	70	25	50	18	30	11
2PGDCA2	DBMS & SQL (With MS Access / MS SQL Server)	3	150	70	25	50	18	30	11
2PGDCA3	A. Computerised Accounting with Tally	3	150	70	25	50	18	30	11
2PGDCA4	Programming with VB.Net	3	150	70	25	50	18	30	11
2PGDCA5	Project Report	6	100	-	-	70	25	30	11
Total		18	700	280	112	270	108	150	60

Evaluation Scheme

1. 36% in each theory, practical, project, dissertation & internal assessment
2. 40% Aggregate marks to pass

DETAILED SYLLABUS

1PGDCA1-FUNDAMENTALS OF COMPUTERS & INFORMATION TECHNOLOGY

Know the Computer - Introduction, What does computer stand for?, Strengths of computers, Limitations of computers, Fundamental uses of computers, Development of computers, Types of Computers, Generations of Computers

Personal Computer - Introduction, Personal computer, Uses of personal computers, Components of personal computers, Evolution of PCs, Developments of processors, Architecture of Pentium IV, Configuration of PC

Boolean Algebra and Logic Gates - Introduction, Boolean Algebra, Binary Valued Quantities, And Operator, OR Operator, NOT Operator, Basic Postulates of Boolean Algebra, Theorems of Boolean Algebra, De Morgan's Theorems, Reducing Boolean Expression by their Simplifications, Proving the Equations of Boolean Expressions By Truth Table, Principle of Duality, Standard Forms, Basic Logic Gates, Use of Logic Gates in Circuits, Karnaugh Maps

Number System - Introduction, Digital and Analog Operations, Binary Data, Binary Number System, Decimal Number System, Octal Number System, Hexadecimal Number System, Fractional Conversion, Coding System

Data Representation and Binary Arithmetic - Introduction, Bits, Nibbles, Bytes and Words, Data Representation, Coding system, Binary Arithmetic, Binary Addition, Binary Subtraction, Binary Multiplication, Binary Division, Character Representation, Checking the Result of Binary Arithmetic

Input Devices - Introduction, Input Device, Typing Input Devices, Pointing Input Devices, Scanning Input Devices, Audio Visual Input Devices

Output Devices - Introduction, Output Devices, Soft Copy Vs Hard Copy Output, Monitor, Printers, Plotter , Electrostatic Technique, Special Purpose Output Equipments

Central Processing Unit - Introduction, What is Central Processing Unit, Arithmetic And Logic Unit, Control Unit, Registers, Instruction set, Processor Speed

Storage Devices - Introduction, Storage and its needs, Brain Vs Memory, Storage Evaluation Units, Data Access Methods, Primary Storage, Secondary Storage, Hard Disk Operations, Floppy Disk Drives, Winchester Disk, Optical Disk, VCD, CD-R, CD-RW, DVD, Zip Drive, Flash Drives, Blue Ray Disk, Memory Card, Driving Naming Conventions In a PC

Basics of Software- Introduction, What Does Software Stand For ?, Needs of software, Types of software, Open Source Software, Integrated Development Environment

Operating System - Introduction, Operating System, Why an Operating System, Functions of Operating System, The Booting Process, Types of Reboot, Booting From Different Operating System, Types of Operating System, Some Prominent Operating Systems

Disk Operating System - Introduction, What is DOS?, Functions of DOS, Versions of DOS, DOS Commands , Important Internal Commands of DOS, Important External Commands of dos, Executable Vs Non-Executable Files In Dos

Programming Languages , Introduction, Data, information And Knowledge, Characteristics of Information, Comparison between human language and , Computer Language, What is a program?, What is a Programming language?, Programming development cycle, Algorithm, Program Flowcharts, Pseudo code, Programming approaches, Programming Paradigms, Types of Programming Language, Third Generation Language, Fourth Generation Language

Computer Virus - Introduction, Virus, History, Mechanism of virus, How A Virus Spreads , How is virus named, A few Prominent Viruses, Types of Computer Virus, Related Concepts :, Anti Virus Programs, Norton Anti - Virus (NAV), Execution of Norton Anti-Virus

Communication and IT - Introduction, Computer Network, Communication Process, Communication Types, Transmission Media, Wireless Media, Communication Channels/Media, Modem, Characteristics of a Modem, Types of Modem

Networks - Introduction, Internet Vs Intranet, Types of Network, Topology, Types of Connectivity, Network Devices

Internet - Introduction, What is Internet actually ?, Growth of Internet, Owner of the Internet, Internet Service Provider, Anatomy of Internet, ARPANET and Internet history of the World Wide Web, Services Available on Internet (Internet Tools), Basic internet terminologies, net etiquette, Application of internet

Management Information System - Introduction, Information System, Management Information System (MIS), Fields of Information System, Elements Of MIS, Objectives Of MIS, Characteristics of MIS, Impact Of MIS, Designing An MIS, Placement Of MIS, Views Of MIS, Pitfalls In Designing an MIS, Advantages of MIS, Disadvantages of MIS

Applications of Computers and Information Technology - Introduction, Business And Computer, E-Mail, E-Commerce, Project management, Computers in Personnel Administration, Accounting, Computers in Cost and Budget Control, Marketing, Manufacturing, Materials management, Banking, Insurance And Stock broking, Purchasing, Computers in warehousing

1PGDCA2-WINDOWS & MS OFFICE

Know the Windows XP , Introduction, What is Windows XP ?, Evolution of Windows Operating System, Features of Windows XP, What's New in Windows XP, Windows and Its Elements.

Accessories And Other Tools , Introduction, The Calculator , Using THE Calculator, The Character Map, Using Outlook Express, The Address Book, The Paint, The Notepad, The WordPad, The NetMeeting, The Internet Explorer, The Windows Media Player, The MS-DOS , The Control Panel , The Windows Picture and Fax Viewer, The HyperTerminal, The Windows Messenger, Using Windows Movie Maker.

Managing Files and Folders , Introduction, Viewing files and folders, Arranging files and folders, Creating a new folder, Creating a file using short-cut.

Customizing Your Computer , Introduction, customizing Your Desktop, Changing the Start menu style, Setting a screen saver, Reversing your mouse buttons, Changing the appearance of your mouse pointer, Adding a new font to your computer, Logging off from the computer, Adding or Removing Programs, Hiding and displaying quick launch bar.

Microsoft Office XP Suite With Other Office Suites , Introduction, Different office suites, Microsoft Office XP Suite, What's Special About Office XP, Voice Dictation and Voice Commands, Smart Tags , The Office Task Panes , The Ask a Question Box, Document Recovery, Product Activation.

Common Elements Of The Suite , Introduction, Different Integrated Items in Office Suite, Menu Bars and Toolbars, Shared Tools, ObjectS, Linking, Embedding, Office Assistant and Online Help.

Office Task Panes , Introduction, The Task Pane, Displaying And Hiding a Task Pane, Types of Taskpane, Additional Task Panes, Insert ClipArt Task Pane, Styles and Formatting Task Pane, Mail Merge Task Pane, Exercise.

Word Processing and MS-Word , Introduction, Features of Word Processor, MS-WORD—a powerful word processor, Starting MS-Word, Chief Elements Of MS-Word Window, Displaying and Hiding the Toolbar, File operations in MS-WORD, Using Help Online, Customizing Office Assistant.

Text Formatting , Introduction, Typing the text, Selecting Text with a mouse, Deleting Text, Restoring the deleted text, Typing over the existing text, Undoing/Cancelling the last action, Redoing/Repeating the last action, Formatting font, Advanced text formatting, Customizing Spelling Check, Using the thesaurus.

Document Formatting , Itroduction , Using page border, Bullets and numbering, Setting and removing tab stops, Making word count, Using Autotext, Using autocorrect, Headers and Footers, Setting up columns in the document, Removing columns from the document, Inserting page numbering, Formatting the page numbering, manual and automatic page breaks, Setting margins, Inserting date and time, Using Goto, Cursor movement with key-board.

Tables And Graphics , Introduction, creating tables, calculating numeric data in a table , Deleting columns and rows, Formatting a table, Aligning text in the table, Formatting text in the table, Applying borders and shadings, Add a border to a table, Automatically format a table , Using Drawing, Creating a Shape, Using Word Art, Using Autoshapes, Insert a clip from the Clip Organizer, Inserting a text box, What is Drawing Canvas?, Using autoshapes.

Mail Merge, Views, Template and Wizard , Introduction, Mail merge , Views, Overview of templates, Creating a document template, Create a Web page based on a template, Modify a document template, RULER, ZOOM, PROTECTING YOUR DOCUMENT, INSERTING A FILE INTO ANOTHER , overview of wizard , Inserting Hyperlinks to a Web Page or a Word Document , EXERCISE.

Spreadsheet and MS-Excel , Introduction , Starting MS-Excel , Spreadsheet and its Elements , Application Window , Document Window, Cell , Standard Toolbar, Formatting Toolbar, Workbook , Worksheet, Handling Files.

Worksheet Formatting , Introduction, Entering Text Data, Entering Formula , Editing the Cell Content, Formatting the Cell , Formatting Font, Setting Border Around Cell, Highlighting gridlines, Using Format Painter, Finding and Replacing the Text, Using Spelling and Grammar.

Function and Operator , Introduction, Entering Functions , Editing Functions, Using Mathematical Functions, Using Statistical Functions, Using Date & Time Functions, Changing the default date format , Text Function, Logical Functions, Financial Function, Operators, AutoSum, Function Wizard.

Chart and Web Object , Introduction, Types of Charts, Creating a Quick Chart Sheet , Parts of a Chart, Types of Charts, Creating A Chart using wizard, Using Pivot Table , Object Linking and Embedding (OLE), Linking Cells, Linking Formula, Hyper Links, Previewing charts, printing charts, Exercise.

Presentation Package And MS-PowerPoint , Introduction, Chief Elements of Presentation, Starting Powerpoint, Creating A Presentation, Creating A Presentation with Auto Content Wizard, Create a presentation using a design template, Creating a blank presentation, Powerpoint window and its Elements, Using Help Online, Customizing Office Assistant .

, **Text Formatting in Slides** , Introduction , Adding text to slides, Editing text on a slide, Using Format Painter, Setting Paragraph Indents, Line Spacing in a Paragraph, Setting and Removing Tab Stops , Checking Spelling of the text , Finding and replacing the text, Moving slides.

Table, Chart and other Drawing Objects, Introduction, Creating a table, Creating an embedded Word table, Adding Columns and Rows, Deleting Columns and Rows, Changing Table Borders, Using Autoshapes, Chart, Inserting a clip to your slide, Using Word Art, Inserting A Word Art, Working With Drawing Toolbar, Creating A Shape.

, **Slides, Views, Notes, Handouts** , Introduction, PowerPoint Views, Notes Pages, Using Handouts, Inserting Header and Footer in the, Slide , Transition , Custom Show, Assigning Custom Animation , Adding a motion path, Animating a chart, Publish a presentation or HTML file , to the Web, Preview a presentation as a Web page, Showing Slides , Printing Slides .

Outlook Express , introduction, WHAT IS outlook express?, Features of Outlook Express, starting outlook express, Concepts of CC and BCC, Email address, Reading a received message , composing message, Replying And Forwarding Messages, attaching files, Creating signature in outlook express, Formatting message text, What is mime?, applying stationery, Inserting a hyperlink or HTML page into a message, Flagging an e-mail or news message, Importing messages from other e-mail programs, What are newsgroups?, Adding a newsgroup account, Switching between e-mail and news reading, Identities (Multiple Users on A Single Computer), Adding a new identity, Managing contacts with outlook, creating addresses, Importing an address book from another program, Using keyboard shortcuts in Outlook Express ,

1 PGDCA 3- PROGRAMMING METHODOLOGY & PROGRAMMING IN FOXPRO

Principles of Programming, Introduction to Programming, Program Concept, Characteristics of Programming, Stages in Program Development, Tips for Program Designing, Programming Aids, Algorithms, Notations, Design, Flowcharts, Symbols, Rules

Programming Techniques and Logic, Introduction, Introduction to programming techniques, Top-down approach or technique, Bottom-up approach or technique, Unstructured technique of programming, Structured technique of programming, Modular technique of programming,

Comparative study of programming techniques, Cohesion , Coupling, Debugging , Syntax Errors, Logical Errors, Data Entry Errors, Linker Errors, Runtime Errors, Program Testing

DBMS and RDBMS, Introduction, What is FoxPro, FoxPro System, Creating a Database File in FoxPro, Closing Database File, Opening Database File, Different Data Types of FoxPro, Database Menu, Program Menu

Displaying & Controlling Data, Introduction, Displaying the Records of Database Files, Different Designs of List, Principal Designs of Browse, Different Designs of Change Command, Modifying the Structure in Database Files, Displaying list of the Files

Sorting and Indexing Database Files, Introduction, Indexing the Files by FoxPro Menu, Use of FIND and SEEK commands, Sorting the Files through FoxPro Menu, Plus Points of Sort command, Minus Points of Sort command

Memory Variables, Introduction, Creating and sing the Memory Variables, Creating Array Memory Variables, Copying Multiple Records to Like Test, Display Memory Array, Using ?? Command

Time & Date Functions and Commands, Set Clock on, Set Century On/Off, Set Mark to, Day & Month, Date Arithmetic

Functions Keys and Macros, Creating and Using the Key board Macros, Creating the Macros, Savings and Restoring the Macros, Using the Macros, Editing the Macros, Recording the Macros, Mathematical Commands and Functions

Programming with FoxPro, What is Program Command File, Creating a Program File, Running the Program File or Command File, Creating the Program File with Modify Command,

Working with Loops, Do While - End Do, The Classification of Mail.PRG Program, Editing a Program File, Running a Program File Through FoxPro Menu, Adding the Comments to Commands, Other Trim Functions, IIF(), The Compactness IF Function, Nested If-End If Structure, Using Scan - End Scan, Handling Multiple Options with Do Case - End Case, Macro Substitution

Error Conditions and Program Debugging Aids, Searching or Displaying Errors before Running a Program File, Unrecognized Command Verb, Saving Screen Activity in An Optical File, Running the Program in Slow Speed, Automatic Documentation with FoxDoc

Multiple Database Files, Introduction, Opening Multiple Data Files, Linking the Database with Set Relation, Updating Information with Update, Appending Records from others Files (Append From), Copying the Structure of Database File, Opening the RQBE Window, Arranging and saving the Records in a File

Custom Screens, Introduction, Screen Co-ordinates in an User window, Restricting Data Input with Range, Assigning Default Value to Get Variables, Common Function Codes for @ SAY, Validating GET VARIABLES

Creating Custom Screen & Designing Screen with Builder, Introduction, Creating the Screen Code, Designing a Custom Screen with CREATE SCREEN, Drawing a BOX, Creating a Push Buttons, Creating Radio Push Buttons

Creating Query, Report and Label, Database Query, Changing and Formatting the Report

1PGDCA4-COMPUTER NETWORKS & INTERNET

INTRODUCTION TO COMPUTER NETWORK, Network, Computer Networks, Need of Network , Uses of Computer Network, Applications of networks, Network Criteria, Network Hardware and Software, network types : client, server & peers, Classification of Computer Network, Server, ATM (Asynchronous Transfer Mode), Modem

THE THEORETICAL NETWORK MODEL - OSI, OSI Model, open system interconnection model (OSI), Layered Architecture of the OSI Reference Model, Functions of the ISO/OSI Layers, Summary of OSI Layer functions

TRANSMISSION TECHNOLOGY, transmission technology, Data can be analog or digital, Analog and Digital Transmission, asynchronous & synchronous transmission, Types of Communication Modes, BaseBand and Broadband Transmission, Comparison of Baseband and Broadband Signaling

NETWORK TOPOLOGY, Network Topology, Types of Network, Local Area Network (LAN), Metropolitan Area Networks (MAN), Wide Area Networks (WAN), Satellite Networks, Wireless LAN

TRANSMISSION MEDIA, Transmission Media, Classification of Transmission Media, Comparison of Guided and Unguided Media, Twisted Pair (TP) Cable, Coaxial Cable, Fiber Optic Cable (FOC), Unguided Media, Radio Frequency Characteristics, Microwave Transmission, Applications of Infrared Transmission, Switching Methods, Packet switching, Circuit Switching, Message Switching

DATA LINK LAYER, Data Link Layer Design issues, Sliding Window Protocols

NETWORK ADAPTERS, Multiple Access Protocol, ALOHA, Carrier Sense Multiple Access (CSMA), CSMA/CD [Carrier Sense Multiple Access/Collision Detection], Collision Free Protocols , Limited Contention Protocol

NETWORK LAYER, Functions of Network Layer, Routing Algorithms, Congestion Control Algorithm

APPLICATION LAYER, Domain Name System, Simple Mail Transfer Protocol (SMTP), Hyper Text Transfer Protocol (HTTP), File Transfer Protocol

CRYPTOGRAPHY, Encryption & Decryption - Cryptography, Terminology, Classification of Cryptography :, Substitution Ciphers :, Security of algorithms :, Steganography :, Steganography vs Cryptography :, public key encryption , Comparison of Symmetric and Asymmetric Key Cryptography , Public Key Cryptanalysis, Digital Signature , Requirements of Digital Signature, Direct Digital Signature, Arbitrated Digital Signature, Authentication Protocols, Symmetric Encryption Approach, Public-Key Encryption Approach, Digital Signature Standard, RSA and Digital Signature, DSS Approach, The Digital Signature Algorithm

SECOND SEMESTER

2PGDCA1-OBJECTS ORIENTED PROGRAMMING WITH C++

Overview of C++ - Overview of C++, Software crisis, Object oriented programming paradigm, Basic concepts of OOP, Advantages/Benefits of OOP, Usage/applications of OOP

C++ Environment, Program development environment, The language and the C++ language standards, Introduction to various C++ compilers, The C++ standard library, Prototype of main() function, i/o operator, manipulator, comments, data types

Creating and Compiling C++ Programs - TURBO C++ IDE, Creating, compiling and running a C++ program using ide and through command line, Elements of C++ Language, Structure of a C++ program, C++ tokens, Type conversion in expressions

Decision Making and Branching - Introduction, Sequential statements, Mathematical Functions, Branching statements, looping Statements, Nested loops, Programming examples

Arrays and Functions- Arrays, The meaning of an array, Single-dimensional arrays, Two-dimensional arrays (Multi-dimensional arrays), User Defined Functions, Elements of user-defined functions, Return values and their types, Function calls, Categories of functions, Passing parameters to functions, Recursion, Command Line Arguments, Storage Class Specifiers

Classes and Objects - Classes, Structures and classes, Unions and classes, Friend function, Friend classes, Inline function, Scope resolution operator, Static class members, Static data members, Static member functions, Passing object to functions, Returning objects, Object assignment

Array, Pointers, References and the Dynamic Allocation Operators - Array of objects, Pointer to object, Type checking in C++, The this pointer, Pointer to Derived Types, Pointer to class members, References, C++'s Dynamic Allocation Operators

Constructors and Destructors - Introduction, Constructors, Default Constructor, Parameterized constructors, Copy Constructors, Multiple Constructors in a class, Constructors with default arguments, Default Arguments, Special Characteristics of Constructor functions, Destructors

Function and Operator Overloading - Function overloading, Overloading Constructor Function, Finding the address of an overloaded function, Operator Overloading, Creating a Member Operator Function, Creating Prefix and Postfix forms of the increment (++) and decrement (--) operators (Overloading Unary Operator), Overloading the Shorthand Operators (i.e. +=, -= etc), Operator Overloading Restriction (Rules), Operator Overloading using friend function, Overloading new and delete operator, Overloading some special operators, Overloading [] (Subscripting) operator, Overloading() (Function Call) operator, Overloading Binary Arithmetic operators, Concatenating String, Overloading Comma (,) operator, Overloading the I/O operators

Inheritance - Introduction to inheritance, Features or Advantages of Inheritance, Type of Inheritance :, Base Classes and Derived Classes, Base Class Access Control, Protected Members, Protected Base class Inheritance, Inheriting Multiple Base Classes, Constructors, Destructors and Inheritance, Passing Parameters to Base Class Constructors, Granting Access, Virtual Base Classes

Polymorphism - Polymorphism, Types of Polymorphism, Virtual Functions and Polymorphism, Pure Virtual Functions, Early Vs Late Binding

The C++ I/O System Basics - The C++ I/O System basics, C++ predefined streams, Formatting using the ios members, Clearing Format Flags, An Overloaded form of setf(), Examining the Formatted Flags, Using width(), Using precision(), Using fill(), Using Manipulators to format I/O, Creating your own Manipulators,

2PGDCA2-RDBMS & SQL (WITH MS ACCESS / MS SQL SERVER/ ORACLE)

Introduction to DBMS & RDBMS - Introduction to database, Introduction DBMS, Different database models, Structure of DBMS, RDBMS an introduction, Cod's law for RDBMS, Components of rdbms (kernel/data dictionary)

Introduction to Oracle RDBMS and Client/Server Computing - Introduction to Oracle, The Features of Oracle 9i, The oracle product details, An introduction to client/server computing, Oracle and client/server computing

Overview of Oracle Architecture - Oracle Architecture, Oracle Files, System and User Processes, Oracle Memory, System Database Object, Protecting Data

Introduction to SQL*PLUS -Introduction to SQL, Features of SQL, Components of SQL, Introduction to SQL*PLUS, Features of SQL*PLUS, Execution of SQL*PLUS, Important commands used in SQL*PLUS, Oracle Data-Types

Working with Tables - Tables - An Introduction, Use Of Table In SQL, Viewing The Stored Data In Tables, Filtering Table Data, Updating Data, Deleting Data From Tables, Modifying The Structure Of Tables, Destroying A Table, A Few Other SQL Statements

Data Constraints - Data Constraints, The Use of Data Constraints, The Types of Data Constraints, Defining Integrity Constraints By 'Alter Table', Removing Integrity Constraints, 'Null' Value Concept, 'Not Null' Constraint, Default Value Concept, 'User Constraints' Table

Data Manipulation in SQL - Oracle Operators, Range Searching, Pattern Matching, LIKE 'IN' and 'NOT IN' Predicates, An Introduction to 'DUAL' Table, An Introduction to 'SYSDATE'

Oracle Functions - Oracle Function, Function Types, Group Function, Scalar Function, Working With 'Date' in SQL, Grouping Of Data Of Different Tables In SQL

Joins, Sub-Queries & Views - types of joins, use of sub-query, 'union' and clause, 'Intersect' Clause, Minus Clause, Concept of View, Types of View, Use of View

User Accounts Management & Indexing - Creation of User Account, User Account Management, Granting Privileges, Revoking Privileges, Modifying Password, Closing User Account, Concept of Index, Creation of Index, Types of Index, Use of Index, Deleting Index

Introduction to PL/SQL Programming - Introduction to PL/SQL, Advantages of PL/SQL, Differences between SQL and PL/SQL, PL/SQL Block Structure, PL/SQL Character set, Variable, Constant and Data type, Assignment Operator and the use of 'SELECT...INTO', PL/SQL Program Control Structure, The use of 'IF...THEN...ELSE...ENDIF', Iteration Control (The use of LOOP, WHILE, FOR), The use of 'GOTO Statement

Cursor - Cursor an Introduction, Types of Cursor, Features of Cursor, Implicit Cursor, Explicit Cursor, Application of for Loop with Cursor

Exception Handling in PL/SQL - Exception Handling in PL/SQL, Built in Exception Handling, User Defined Exception Handling, The Raise Application-error Procedure

Oracle Transaction - Oracle Transaction, Commit Statement, Rollback Statement, Save point statement, Concept of lock, Types of locks, Levels of Locks, 'SELECT.....FOR UPDATE' Statement, Removing the Lock

Procedures and Functions- Concept of Procedures and Functions, Advantages of Procedure and Function, Creation of Procedure and Function, Deleting Procedure and Function

Database Triggers - Concept of Triggers, Types of Triggers, Creation of Triggers, Application of Triggers, Deleting Triggers

2PGDCA3-A. COMPUTERISED ACCOUNTING WITH TALLY

Accounting, Meaning Of Accounting, Objectives Of Accounting, Important Terms, Accounting Equation, Rules Of Debit And Credit- Journal & Ledger, Journal, Ledger, Cash Book, Subsidiary Books, Financial Statement, Trading & P&L A/C, Balance-sheet, Inventory, Adjustment Entries, Bill Of Exchange

Installing Tally 9, Introduction, Tally 9.0 (Release 1.0), Major Enhancements In Tally 9, Minor Enhancements In Tally 9, Multilingual Business Accounting And Inventory Management Features, Performance And Implementation Features, Accounting And Inventory Control Features, Installing Tally 9.0, Application Directory, Data Directory, Configuration Directory, Language Directory, Activating Tally, Activating Tally Gold For Multi User, Registering Tally, Validating Tally, Tally Data Migration Tool, Uninstalling Tally 9

ABC of Company, Creation Of New Company Selection Of New Company Deletion Of Company Alteration Of Company Shut A Company

Company Features, Features Of Company Accounting Features Inventory Features, , Statutory Features

Tally Screen Components, Title Bar, Button Bar, Calculator, Working Area, Quitting, Gateway Of Tally, Current Status Area

Configuration, General, Numeric Symbols, Accts/Inventory Info, Printing, Connectivity, Licensing, Shop, Quit

Budget, Introduction, Budget, Creating Budget, Alter A Budget, Delete Budget, Display Budget/ Budget Variance, Scenarios

Job Costing, Introduction, Enabling Or Configure Job Costing In Tally, Master Creation For Job Costing, Voucher Type And Voucher Class, Job Cost Reports

Reports, Introduction Accounting Reports, Trial Balance, Balance Sheet, Profit & Loss, Cash Flow Statement, Fund Flow Statement, Ratio Analysis, Day Book, Cash/Bank Book Sales Register Purchase Register Outstanding Interest Cost Centers Job Work Analysis Statistics Inventory Reports

Accounts Groups & Ledgers, Introduction Accounts Group Multiple Group Creation Display Group Alter Group Multiple Ledgers Display Ledger Alter Ledger Voucher Types

Payroll Accounting, Introduction, To Activate Payroll In Tally 9, Payroll Menu, Display Pay Heads, Multiple Group Creation, Employee Creation, Salary Detail, Attendance, Attendance Type, Voucher Creation

Export & Import, Introduction, Export, Import, ODBC Compliances

Cost Centre, Introduction Cost Centre, Creating Cost Centre, Display Cost Centre, Alter Cost Centre Cost Category, Create Cost Categories, , Display Cost Categories, Alter Cost Categories Voucher Entry Cost Centre Class, Creating Cost Centre, Invoice Entry Using Cost Centre Reports Related To Cost Centre

Foreign Currencies, Introduction Foreign Currency, Create Foreign Currency, Alter Foreign Currency, Display Foreign Currency, Exchange Rate Entry Voucher Entry Using Foreign Currency Voucher Entry Through Forex Journal Voucher Class Reports Related To Foreign Currency

Interest, Introduction, Interest, Simple Mode, Interest On Outstanding Balances, Reports On Interest Calculated On Outstanding Balances, Advanced Parameter Mode, Interest Calculation Transaction By Transaction/Voucher Interest At Fixed Rate, Voucher Interest At Variable Rate, Statement Of Interest Due On Invoice, Interest Reports, Interest Voucher Class

Printing, Introduction Cheque Printing Printing Of Cheque Multi Account Printing Printing Options General, Purchase Printing, Sales Transaction, Receipt Voucher, Journal/Contra, Debit/Credit Note, Reminder Letter, Confirmation Statement Reports Printing Button Related

Bank Reconciliation, Introduction, Bank Reconciliation In Tally 9, Configuration Of Bank Reconciliation

Security Control, Introduction Security Levels Access Type

Backup & Restore, introduction, Group Company, Create a Group Company, Alter a Group Company, Tally Audit, Splitting Company Data

Inventory, Introduction Stock Group Stock Item Stock Categories Godowns Units Of Measures Rate Of Duty Inventory Vouchers Reorder Level Inventory Reports Inventory Info Inventory Books Statement Of Inventory Batch Wise Details Price List

2PGDCA4-PROGRAMMING WITH VB.NET

Introduction to .NET - Introduction, What is a Program?, What is Programming?, What do you mean by .NET Framework?, Features of .NET Framework, VB 6 VS VB.NET, VB.NET VS JAVA, VB.NET VS C#, What is .NET Architecture?, What is CLR?, What do you mean by Class

Library?, Versions of .NET Framework, What are Assemblies?, Namespaces, CTS (Common Type System), Interfaces, What is special in VB.NET?

Visual Studio 2005 - Introduction, What is Visual Studio?, Flavors of Visual Studio, Visual Studio 2005, File Extensions Used in VB.Net, Using Visual Studio 2005, Feature of Visual Studio 2005, Output Window, Components Tray, References and the Reference Window, Quick View of Visual Studio 2005, Opening an existing project, Adding a Form to a Project

The Visual Basic Language - Visual Basic Statements, Data Types in VB.NET, Declaring Variables, Declaration of Variables (Advanced), Data Type Conversion, String Functions, Formatting Data, Arithmetic Operators, Parentheses and Precedence, Operator Operation, Constants, Control Statements, Arrays in VB.NET, Specifying Optional Procedure Arguments, Passing a Variable Number of Arguments, Recursion, Using a Delegate

Working With The Controls - The Toolbox, Adding and deleting Tools in the Toolbox, creating a tab on the toolbox, Form Designer Basics, The Button, The ComboBox , The ListBox, The Checkbox, The PictureBox, The RadioButtons, The Scroll Bar, Timer, ListView, TreeView, Toolbar, Dialog Boxes, Menus in VB.NET, LinkLabel Control

Designing Menus - Menus, Context menu, Event of the MenuItem, Creating menu items in Visual Studio .Net

Object Oriented Programming with VB.NET - OOPs?, What is an Object?, What are Classes?, Visual Basic .NET and Object-Oriented, Principles of Object-Oriented Programming, Classes V/s Objects, Inheritance, Polymorphism and Overloading, Scope and Accessibility in Class Modules, Namespaces, Managed Execution, Assemblies, Assemblies in VB .NET

The .NET Framework Class Library - The .NET Framework Class Library, The System Namespace, Data Type Conversion Using Convert Class, The Array Class, The Math Class, The String Class, Other Namespaces, System.Collections, System.Data, System.IO

OLE/COM/Win32 API - Object Linking and Embedding, History of OLE/COM, Component Object Model (COM), COM interoperability in .NET, Win32 API in .NET, COM Interoperability in .NET, Installation and Registration of Assembly, Microsoft Office solutions with Visual Studio .NET, Automation of Office from Visual Studio .NET, Creating and opening Microsoft Word document from VB.NET

User Controls in VB.NET - Introduction, The Control Class, The Control Class' Properties, The Control Class' Methods, Creating the Control Project 1, The RoundButton Control, Creating the Control Project 2, Building the new Button

A Brief Introduction to Database Access with VB .NET - Introduction, What is ADO?, What is ADO.NET?, The Connection Object, Connecting to a Database, The Command Object, The DataAdapter Object, The DataReader Object, The DataSet Object, Updating Your Database by Using DataSets, The AcceptChanges () Method, The RejectChanges () Method, The HasChanges () Method, The GetChanges () Method, Working with DataSets in Visual Studio, Moving Around in DataSet and Retrieving Data, Using Strongly Typed DataSets, DataSets With Multiple Tables, Finding and Sorting Data in DataSets, Filtering on Row State and Version, Data View Manager

Graphics In VB.NET - Introduction, Service of GDI+, Using GDI+ Manged Classes, BRUSH Class, Bitmap Class, Graphics Class, Simple Drawing, Drawing Text, An Example: Show All Fonts, Printing, Printing Multiple Pages, More on the PrintPageEventArgs Class, Using a Print Dialog Control, Rolling Your Own Printing Code, Print Preview

2PGDCA5 – PROJECT REPORT

All the candidates of PGDCA are required to submit a project-report based on the work done by him/her during the project period. A detailed Viva shall be conducted by an external examiner

based on the project report. Students are advised to see the detailed project related guidelines on the website of CVRU. (www.cvrु.ac.in) under Project Guidelines for student section.