**Post Graduate Diploma in Computer Applications (PGDCA)**

**Subject:** CONCEPTS OF COMPUTER APPLICATIONS

**Code**: PDCA500

**Credits**: 3

**OBJECTIVES:** To enable students to acquire basic knowledge of fundamentals of computer and become familiar with the use of IT tools and they will also learn about the benefits and importance of IT in today’s world

**UNIT-I**

Introduction to computer - Definition of computer, Generation of Computers – First, Second, Third, Fourth & Fifth generations, Characteristics of computers, Capabilities and Limitations; Types of computer and their characteristics – analog, digital, hybrid, micro, mini, mainframe and super computers; Types of PC’s and their characteristics – Desktop, Laptop, Notebook and Palmtop; Basic components & Block diagram of computer system – Control Unit, ALU, Memory (RAM, ROM, EPROM, PROM)

**UNIT-II**

Input & Output Devices – Keyboard, Mouse, Trackball, Joystick, Scanner, MICR, OCR, Touch Screen; Monitor – Types – Digital, Analog, Characteristics- size, resolution, refresh rate, interlaced/non-interlaced, dot pitch, video standard- VGA, SGVA, XGA; Printer- Daisy wheel, dot matrix, inkjet, laser; Plotter

**UNIT-III**

Storage devices- Storage fundamentals- Primary and Secondary; Data storage and retrieval method- sequential, direct and index sequential; Various storage devices- Magnetic tape, magnetic disk, cartridge tape, data drives, hard disk drives, floppy drive, pendrive; Number system- data representation in computers, number system of computers – binary, octal, decimal , hexadecimal- representation and their conversion

**UNIT-IV**

Computer software- Need, types of software-system software and application software; System software-Operating system, assembler, compiler & interpreter; Operating Sytems-functions, types-batch, single user, multi-user, multiprogramming, multiprocessing; Programming language-machine, assembly, high level, their merits and demerits, Application software-word processor, spreadsheet, presentation graphics, database management software-their characteristics, uses, examples and area of applications.

**UNIT-V**

Introduction to open source- what is open source, history, need for open source, advantages, application of open sources, licensing, open source operating system, database management system, programming languages; open source application software

**TEXTBOOKS:**

### Sanders, D.H., "Computer Today ", Mc-Graw Hill

1. Suresh K. Basandra, “Computers Today”, Galgotia Publications Pvt. Ltd.

**REFERENCES:**

1. Raja Raman V., "Fundamental of Computers", Prentice Hall of India, New Delhi.
2. Trainer T., et al, "Computers”, McGraw Hill.
3. Norton, Peter, “Introduction to Computers”, Mc-Graw-Hill.
4. B. Ram, “Computer Fundamentals”, New Age International Pvt. Ltd.
5. S. Jaiswal, “Fundamental of Computer & IT”, Wiley Dreamtech India.

**Subject:** CONCEPTS OF ALGORITHMS AND PROGRAMMING (CAP)

**Code**: PDCA501

**Credits**: 3

**OBJECTIVE:** The objective of this subject is to discuss the basic techniques and algorithms for attacking and solving various types of problems. The emphasis should be on writing algorithms and programs in C and understanding the object oriented paradigm

**UNIT-I**

Definition of Algorithms- Writing algorithms- top down design – Program verification- The efficiency of algorithms- Concept of Recursion- some simple example to illustrate these concepts like finding the GCD of two numbers- Swapping two variables- Summation of n given numbers- generation of Fibonocci sequence- Reversing a given number-Base conversion.

**UNIT-II**

Introduction to- C character set- Delimiters-The C Keywords-Identifiers- Constants-Variables-Rules for Defining Variables-Data Types-Declaring Variables- Initializing Variables – Type Conversion-Priority of Operators and their Clubbing- Comma and Conditional Operator-Arithmetic Operators-Relational Operators –Logical Operators-Bitwise Operators-Input and Output in C-Formatted and Unformatted Functions -Library Functions; if statement- if…else statement-various forms of if- nested if -break statement-continue statement – go to statement - switch statement - nested switch statement - for statement -while statement do while statement - arrays - working with string and standard functions.

**UNIT-III**

Introduction to pointers – pointer declaration – Arithmetic Operations with pointers – pointers and arrays – pointers and two-dimensional arrays – array of pointers – pointers to pointers – pointers and strings – void pointers – function definition and declaration – proto types - types of functions – call by value and reference – functions returning more values – function as an argument – function with operators – function and decision statements – function and loop statements – function with arrays and pointers – recursion – pointer to function – storage classes; preprocessor directives– structures and unions – bit wise operators – files – command line arguments – dynamic memory allegation – graphics in C .

**UNIT-IV**

Introduction to C++: Identifier, Keywords, Constants, data types, Modifiers, reference variables, Operators, Type conversion, Variable declaration, expressions, statements, manipulators Input and output statements, stream I/O, Conditional and Iterative statements, breaking control statements. Storage Classes: Automatic, Static, Extern, Register, Functions- Prototyping, Definition and Call, Scope Rules; Function overloading, Default Arguments, Const arguments; Pointer to functions, Inline functions;Classes and Objects-Class Declaration and Class Definition, Defining member functions, making functions inline, Nesting of member functions, Members access control, const data members, Const member functions, this pointer;Friend functions and Friend classes; Constructors-properties, types of constructors;Destructors- Properties, Destroying objects, rules for constructors and destructors

**UNIT-V**

Inheritance-defining derived classes, inheriting private members, single inheritance, types of derivation, function redefining, constructors in derived class; types of inheritance-Single, Multiple, Multilevel and Hybrid, types of base classes-Direct, Indirect, Virtual, Abstract, code reusability;Polymorphism: Methods of achieving polymorphic behaviour; Operator overloading: overloading binary operator, overloading unary operators, rules for operator overloading, operator overloading using friend function. Function overloading: early binding, Polymorphism with pointers, virtual functions, late binding, pure virtual functions and abstract base class. Virtual destructors;Difference between function overloading, redefining, and overriding

**TEXTBOOKS:**

1. E. Balagurusamy, “Programming in C”, TMH Publications
2. Herbert Schildt, “The Complete Reference C++”, Tata McGraw-Hill

##### **REFERENCES:**

1. Deitel and Deitel, “C++ How to Program”, Pearson Education, 2001
2. YashavantKanetkar, “Let Us C”, BPB publication

**Subject:** CAP-PRACTICAL

**Code**: PDCA502

**Credits**: 3

**OBJECTIVE:** To provide students the skill for programming and algorithms using C and C++

**LIST OF PROGRAMS:**

1. Development of Algorithm for simple problem.
2. Development of Flowcharts for simple problem.
3. Program to simulate a simple Calculator that performs Arithmetic Operations.
4. Program to implement Decision Control statements.
5. Program to implement Looping Structures.
6. Program to implement Arrays and Multi-Dimensional Arrays.
7. Program to implement Functions.
8. Program to perform String Handling Functions.
9. Program to demonstrate Structure and Union.
10. Program to demonstrate the use of Pointer concepts.
11. WAP to find the roots of a quadratic equation using C language
12. WAP to find whether given number is prime or not using C language
13. WAP using C language to find the reverse of a given number
14. WAP using C language to find whether given number is palindrome or not
15. WAP using C language to find the value of sinx, using series expansion
16. WAP using C language to Sort the elements in a given array, using bubble sort
17. WAP to Sort the elements in a given array, using insertion sort using C language
18. WAP to find the product of two matrices of sizes 3 x 4 and 4 x 3 using C language
19. WAP to find the position of given element in the array, using binary search using C language
20. Print the elements in the reverse order of the given elements in the array using C language
21. WAP to find the number of vowels in a given string using C language
22. WAP to find the number of letters in the given string using C language
23. WAP to find the number of words in the given string using C language
24. Write a C++ program to implement flight class with data member as flight no,source, destination and fare. Write a copy constructor and a member function to display the flight information.
25. Write a C++ program to implement a string object. Include member functions to compare two strings and to concatenate two strings
26. Write a C++ program to implement a class to represent complex numbers. Include member functions to add and multiply to complex numbers. Overload assignment operator =
27. Write a C++ program to implement time class that has separate data members for hours, minutes and seconds. Overload + Operator to add two times (object) and ++ operator to increment the time by one second
28. Write a C++ program to implement a student class having roll no., name, rank, addresses as data members. Overload assignment operator =
29. Write a C++ program to implement user defined string class. Overload the constructor and a member function to concatenate two strings.
30. Write a C++ program implement Complex class with the member function Add, Subtract and Multiply two complex Numbers
31. Write a C++ Program to implement a sphere class with appropriate members and member function to find the surface area and the volume (Surface = 4 π r2 and Volume = 4/ 3 π r3 )
32. Write a C++ program to implements a string class. Overload + Operator to concatenate two strings
33. Write a C + + program to implement matrix class. Add member function to transpose the matrix
34. Write a C++ program to find the number of characters, word and lines in the given text as input
35. Write a C++ program to implement a telephone bill class with Name, Address, Tel. No., No. of calls as data members. Compute the amount to be paid if the charges per call is Rs. 2/-
36. Write a C ++ program to implement a class for complex numbers with add and multiply as member functions. Overload ++ operator to increment a complex number
37. Write a C ++ program to implement a date class with member functions as next, previous which return next date and previous date objects

**Subject:** OFFICE PACKAGE-PRACTICAL

**Code**: PDCA503

**Credits**: 3

**OBJECTIVE:** This paper intends to familiarize the students with MS Office and libre office and its applications in the relevant fields.

**UNIT-I**

MS Word – Introduction to MS Word- Creating and saving a document, opening an existing file, saving a file using a new name; Editing a document- inserting, overwriting and deleting text, cut, copy and paste, correcting spelling and grammatical errors, using the Thesaurus, finding and replacing text; Formatting text- character formatting, paragraph formatting and document formatting; Advanced formatting and editing techniques- bullets and numbering, borders and shading, changing case, auto correct tool, working with tables and pictures; Mail merge- merging excel to word.

**UNIT-II**

MS PowerPoint- Introduction & area of use, Creating a new presentation, saving, closing and opening a presentation, inserting, deleting and copying slides, slide setup, slide master, adding animation and transition effect, slide show, printing presentation.

**UNIT-III**

MS Excel – Introduction, workbook and worksheet, understanding ranges, selecting cells, edition data, rearranging cell contents, saving a workbook, opening an existing workbook, protecting a workbook; Formulae in Excel- addressing method, using auto sum, functions; Formatting data- cell formatting, using auto format, row format; Managing workbooks- inserting sheets, copying and moving sheets, renaming sheets, deleting sheets; Managing data- data list, sorting data, filtering data, automatic subtotals; working with charts.

**Subject:** GENERAL PROFICIENCY

**Code**: PDCA504

**Credits:** 2

**OBJECTIVE:** To provide foundation and concepts related to mathematical skills and knowledge for understanding the basic rules of mathematics.

**UNIT-I**

Arithmetic Ability **-** Surd and indices, Percentage, Profit and loss, Ratio and proportion, partnership, time & work, time and distance, allegation or mixture, area, volume and surfaces, clock & calendar.

Permutations and Combinations, Data interpretation: Tabulation, graph and chart

**UNIT-II**

Principle of Mathematical Induction: Process of the proof by induction. The principle of mathematical induction and simple applications; Complex Numbers and Quadratic Equations; Argand plane and polar representation of complex numbers; Statement of Fundamental Theorem of Algebra, quadratic equations in the complex number system, Square-root of a Complex number; Linear Inequalities, Binomial Theorem, Sequence and Series: Arithmetic Progression (A.P.), Arithmetic Mean (A.M.), Geometric Progression (G.P.)

**UNIT-III**

Mathematical Reasoning **-** Mathematically acceptable statements. Connecting words/phrases - consolidating the understanding of “if and only if (necessary and sufficient) condition”, “implies”, “and/or”, “impliedby”, “and”, “or”, “there exists” and their use through variety of examples related to real life and Mathematics.

**UNIT-IV**

Statistics: Measure of dispersion; mean deviation, variance and standard deviation of ungrouped/groupeddata; Analysis of frequency distributions with equal means but different variances; Probability: Random experiments: outcomes, sample spaces (set representation). Events: Occurrence ofevents, ‘not’, ‘and’ & ‘or’ events, exhaustive events, mutually exclusive events; Axiomatic (settheoretic) probability, connections with the theories of earlier classes. Probability of an event, probability of ‘not’, ‘and’, & ‘or’ events.

**UNIT-V**

Straight Lines: Brief recall of 2-D from earlier classes, shifting of origin. Slope of a line and angle between twolines. Various forms of equations of a line: parallel to axes, point-slope form, slope-intercept form, two-point form, intercepts form and normal form.

**TEXTBOOKS:**

1. R. D Sharma, “Mathematics Vol. 1 & 2”, Dhanpat Rai Publications; 2017 edition
2. NCERT Materials on Mathematics

**REFERENCES**

1. R.S Aggarwal, “Quantitative Aptitude, S Chand Publications; 20th edition
2. NPTEL Materials

**Subject:** WEB DESIGNING-PRACTICAL

**Code**: PDCA505

**Credits**: 2

**OBJECTIVE:** The students will learn about the various web designing techniques and build their own websites using different tools.

**CONTENTS:**

1. Creating web page using basic formatting tags: heading, paragraph, underline break, bold, italic, underline, superscript, subscript, font and image; different attributes like align, color, bgcolor, font face, border, size
2. Write HTML code to develop a Web page having the background in red and title "My First Page" in any other color
3. Create an HTML document giving details of your name, age, telephone number, address, TLC code & enrolment number aligned in proper order
4. Write an HTML code to design a page containing text, in form of paragraphs giving suitable heading style
5. Create a page to show different attributes of Font tag
6. Create a page to show different attributes: italics, bold, underline
7. Creating web page having navigation links using anchor tag, internal, external, mail and image links; lists-ordered, unordered
8. Creating web page having table tag; HTML Form controls-form, text, password, textarea, button, checkbox, radio button, select box, hidden controls, Frameset and frame
9. Write an HTML code to create a Web page of blue color and displaylinks in red colour
10. Create a Web page with appropriate content and insert an image towards the left hand side of the page. When user clicks on theimage, it should open another Web page
11. Create a Web page, which should contain a table having two rows and two columns.
12. Write an HTML code to develop a Web page having two frames that divide the Web page into two equal rows.
13. Write an HTML code to develop a Web page having two frames that divide the Web page into two equal rows and then divide the second row into two equal columns.
14. Write an HTML code to develop a Web page having frames as described in the above question and then fill each frame with a different background color
15. Design a page with a text box called 'name' and a button with label 'Enter. When you click on the button another page should open,with the message "Hello < name >", where name should beequal to the name entered in the first page
16. Design a Web Page, which is like 'compose' page of e-mail 1. Designa Web Page, which is like 'compose' page of e-mail
17. Writing programs implementing cascading style Sheet (CSS), CSS syntax, comments, id and class, background color, background image- text - text color, text alignment, text decoration, text transformation, text indentation; CSS font - font families, font style, font size - setting text size , using pixels and em; CSS lists - different list item markers, unordered list, ordered list, an image as the list item marker
18. Writing programs implementing CSS tables - table borders, collapse borders, table width and height, table text alignment, table padding, table color; CSS positioning - static positioning, fixed positioning, relative positioning, absolute positioning, overlapping elements, float, horizontal align,image gallery, image opacity/transparency
19. Writing program using Javascript tag, comments, variables, document methods-write and writeln methods, alert; operators-arithmetic, assignment, relational, logical, javascript functions, conditional Statements, loops, break and continue; events familiarization-onLoad, onClick, onBlur, onSubmit, onChange
20. Write a JavaScript code to create a pull down menu box.
21. Write a program to move a text with mouse pointer and to change colour of text randomly
22. Create a Web page using two image files, which switch b/w one another as the mouse pointer moves over the image. Use the On Mouse over and On Mouse out event handler
23. Create an HTML form that has a number of text boxes. The user fills the textboxes with data. Write a script that verifies that all textboxes have been filled. If a text box has been left empty pop up an alert message indicating the box that has been left empty. When OK button is clicked, set focus to that specific textbox. Ifall the textboxes are filled, display thank you.
24. Working HTML 5 events using javascript-offline,onabort, onafterprint, onbeforeonload, onbeforeprint, onblur, oncanplay, oncanplaythrough, onlclck, oncontextmenu, ondbclick,ondrag,ondragend,ondragcenter,ondragleave,ondragover,ondragstart,ondrop,ondurationchange,onemptied,onended,onerror,onfocus,oninput,oninvalid,onload,onmouseover,onmouseup,onmousewheel,onpagehide,onpageshow,onplaying,onprogress,onratechange,onredo,onresize,onscroll,onseeked,onseeking,onselect,onsubmit, onsuspend, onundo, onunload,onvolumchange,onwaiting
25. Working with scalable vector graphics-embeding SVG,SVG line, circle,rectangle, ellipse, polygon, gradients; Canvas element-using canvas to draw polygon,path, text, transformation
26. Working with web storage-session storage, local storage, delete web storage; web socket events-open, message, error, close;web socket methods-socket.send(),socket.close()
27. Working with Joomla 3.4 CMS-installation,work areas, control panel, -tootlbar;menu-content, component, extensions, help menu
28. Creating menus, adding menus items, modifying menu items, submenus
29. Working with Joomla modules-create module, breadcrumb module, feed display module, footer module, search module, random image module, whos is online module, syndicate module
30. Working with Joomla global setting-system setting, media setting, language manager, private messages, mass emailing, cache management, users setting
31. Working with Joomla template-template manager, customize template, adding template, creating, adding,customize logo, category management, adding content, formatting content, article metadata, adding banners, contacts adding news feed, adding forum, web links
32. Working with joomla plugins-plugin mangers, authentication plugins, content plugins, editor plugins, search plugins, users plugins, extension, system plugins
33. Working on Site Management-global configuration- site online and offline, metadata setting, change site url ,updating web site, updating extension, disabling and uninstalling extensions, back up site
34. Web hosting-www, web server, internet service provider, web hosting providers,domain names, web hosting email servers,web hosting technologies and types
35. Working with Cpanel-using file section tools, mange domains, manage email, manage security section, manage databases, manage software section tools

**TEXTBOOKS:**

1. HTML5 and CSS3: Develop with Tomorrow's Standards Today, Hogan Brian P**,** Springer India Private Limited
2. HTML 5 Foundations, Matt West, Wiley India Pvt Ltd
3. Using Joomla, Ron Severdia Kenneth Crowder, Shroff Publications

**REFERENCES:**

1. Responsive Web Design with HTML5 and CSS3, Hogan Brian P., Shroff Publishers & Distributers Private Limited - Mumbai
2. HTML 5 and CSS 3 Made Simple, Ivan Bayross, BPB
3. Joomla Accessibility, Joshue O Conner, Shroff Publications

**Subject:** FUNDAMENTALS OF NETWORKING

**Code**: PDCA550

**Credits:** 4

**OBJECTIVE:** It aims to provide the student with a basic knowledge necessary to understand the fundamental building blocks that form a modern network, such as protocols, topologies, hardware, and network operating systems. It then provides in-depth coverage of the most important concepts in contemporary networking, such as TCP/IP, Ethernet, wireless transmission, and security

**UNIT-I**

Introduction to Networking-Overview, Objectives, Introduction, Networking Connectivity, Network Extension, Network Topologies, Protocols, Programs and Processes, Protocol Layering Concepts, Encapsulation and Decapsulation

**UNIT-II**

The OSI Model Layers 1 - 4-Overview, Objectives, Introduction, The Physical Layer, The Data Link Layer, The Network Layer, The Transport Layer

**UNIT-III**

The OSI Model Layers 5 - 7-Overview, Objectives, Introduction, The Session Layer, The Presentation Layer, The Application Layer

**UNIT-IV**

LAN Architecture-Overview, Objectives, Introduction, History of LANs Transmission, Methods and Media, LAN Protocols, Ethernet, Token Ring, Token Bus, Fiber Distributed Data Interface (FDDI),Wireless LANs, LAN Protocols

**UNIT-V**

Networking devices- Introduction, Goal of networking devices, Objectives, Repeaters, Hubs, Switches, Bridges, Routers, Gateways

**TEXTBOOKS:**

1. Andrew S. Tanenbaum, ‎David Wetherall, “Computer Networks”
2. Dr. Madhulika Jain and Satish Jain, “Data Communication And Computer Networks”

**REFERENCES**:

1. Larry L. Peterson, ‎Bruce S. Davie, “Computer Networks: A Systems Approach”
2. Natalia Olifer, ‎Victor Olifer, “Computer networks: Principles, technologies and protocols”

**Subject:** VISUAL PROGRAMMING

**Code**: PDCA551

**Credits**: 3

**OBJECTIVE:** To provide students with the knowledge and skills needed to develop applications in Microsoft Visual Basic .NET for the Microsoft .NET platform. The paper focuses on user interfaces, program structure, language syntax, and implementation details.

**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 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 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.

**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, RadioButton, Panel, scroll bar, Timer, ListView, TreeView, toolbar, StatusBar.There Properties, Methods and events. OpenFileDilog, SaveFileDialog, FontDialog, ColorDialog, PrintDialog. Link Label. Designing menues: ContextMenu, access & shortcut keys.

**UNIT–IV**

Object oriented Programming: Classes & objects, fields Properties, Methods & Events, constructor, inheritance. Access Specifiers: Public Private, Projected. Overloading, My Base & My class keywords. Overview of OLE, Accessing the WIN32 API from VB.NET & Interfacing with office97, 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. Generate Reports Using CrystalReportViwer.

**TEXTBOOKS:**

1. Steven Holzner,“VB.NET Programming Black Book”, Dreamtech publications
2. Evangelos Petroutsos, “Mastering VB.NET”, BPB publications

**REFERENCES**:

1. Introduction to .NET framework-Worx publication
2. msdn.microsoft.com/net/

**Subject:** RELATIONAL DATABASE MANAGEMENT SYSTEM-PRACTICAL

**Code**: PDCA552

**Credits**: 3

**OBJECTIVE:** The objective of this paper is to introduce to the students the fundamental concepts necessary for designing, using and implementing database systems and applications

**CONTENTS:**

1. Working with MySQL Data Definition, Table Creation, Constraints
2. Working with Insert, Select Commands, Update & Delete Commands
3. Study of SELECT command with different clauses
4. Study of GROUP functions (avg, count, max, min, sum)
5. Study of various type of SET OPERATORS (Union, Intersect, Minus).
6. Writing Nested Queries & Join Queries
7. Working with MySQL date and time format-extracting year, month, calculating present age from date of birth
8. Implementing Views
9. Working with Transaction

**Subject:** PC ASSEMBLING AND TROUBLESHOOTING-PRACTICAL

**Code**: PDCA553

**Credits:** 3

**OBJECTIVE:** To enable the student to understand all the parts of the computer, their relationship and their functionality and also he will be able to identify the problem associated with the computer.

**UNIT-I**

Introduction to pc-Architecture of the System (PC how does it work?); Understanding the function of a computer, the input device, output device, memory, storage device, CPU, system board, interfaces: parallel and serial, Power system: SMPS, power supply connector, UPS.

**UNIT-II**

PC assembly- Identification of the different physical parts of the computer -DVD/CD drives, Hard Disk Drive, processor, SMPS, RAM, motherboard, cmosetc;Different types of cable used in connecting the parts into the mother board; Mounting Motherboard in cabinet and installing different parts into the motherboard; connecting cables;PC Upgrade Options & Strategies for different usage of computer (professional, Gamer, ordinary)

**UNIT-III**

Installation and Upgradation-Operating system, devices drivers and other application softwares; Basic of networking, IP configuration, peer to peer connection

**UNIT-IV**

PCmanagement and maintenance-Basic windows administration: task manager, control panel, disk management, device manager etc. case study on window XP,7,8, Antivirus; connecting PC with peripheral devices (projector, printer, etc)

**UNIT-V**

BIOS-Typical Motherboard BIOS, BIOS Features, BIOS & Boot Sequences, BIOS troubleshooting; Software troubleshooting: Windows troubleshooting; Hardware troubleshooting: POST (Power-on Self Test) routine, mother board problems, HDD problem, Peripherals problems, miscellaneous problems; Error Code: Beep Code, Post Code, Post Reader Card

**TEXTBOOK:**

1. K. L. James, “Computer Hardware: Installation, Interfacing, Troubleshooting and Maintenance”

**REFERENCES:**

1. David Groth, “A+ core module”
2. Balvir Singh, “PC Hardware”
3. Scott Mueller, “Upgrading and Repairing PCs”

**Subject:** VISUAL PROGRAMMING-PRACTICAL

**Code**: PDCA554

**Credits**: 3

**OBJECTIVE:** To provide students with the knowledge and skills needed to develop applications in Microsoft Visual Basic .NET for the Microsoft .NET platform. The paper focuses on user interfaces, program structure, language syntax, and implementation details.

LIST OF PROGRAMS:

1. Programs implementing the components of VB Control and its properties
2. Programs implementing the concept of Variables
3. Programs implementing the concept of Decision Statements
4. Programs implementing the concepts of Looping statements
5. Programs implementing the concept of VB Functions
6. Programs for accessing a database using VB controls and functions
7. Program to input numbers in 1D array and print in ascending & descending order.
8. Program to demonstrate Class, Constructor and Inheritance.
9. Design a simple calculator to implement Addition, Subtraction, Multiplication and Division
10. Design the marks sheet of student which display all details including the total marks of student and percentage
11. Create a from using check box and option button to give the effect of fonts such as Bold, Italic, underline, strike through respectively for the text entered in the Rich Text Box
12. Create a simple application which contains menus, Rich Text Box, Common Dialogs Boxes