PROGRAM-GUIDE

DIPLOMA IN COMPUTER PROGRAMMING AND APPLICATIONS (DCPA)

- **Scheme of Examination**

- **Detailed Syllabus**

- **Counseling and Study Structure**

- **Study Modules & Books Information**

Detailed Syllabus

DCPA1 - FUNDAMENTALS OF COMPUTERS AND INFORMATION TECHNOLOGY

Brief history of computer, Definition of computer, characteristics of computer, applications of computer, computer v/s calculator, computer Vs human being, Types of computers Generations of computers, Basic components of a computer system - Control unit, ALU, Input/Output their functions and characteristics. Instruction cycle of computer.

Personal Computer (PCs) – evolution of PCs, configurations of PCs- PC/XT, AT, 486, Pentium computers and Newer, PCs, Motherboard and its various sections, use of Expansion slots and various types of extension cards, Introduction and main capabilities &characteristics of new microprocessors--Dual core, Core 2 duo and quad core processors, Memory –primary and secondary types of memory RAM, ROM, EPROM, PROM, Cache Memory, SDRAM, DDR, DDR2 etc.

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

Software and its Need, Types of Software - System software, Application software, Utility Software, System Software - Operating System, Programming languages, Assemblers, Compilers and Interpreter, Introduction to various operating system for PCs—DOS, Windows, Linux etc.

File System basics – File Allocation Table (FAT & FAT 32), NTFS and ext3 file systems, files & directory structure and its naming rules, booting process details of DOS and Windows, DOS system files.

Programming languages- Machine, Assembly, High Level, 4GL, their merits and demerits, Application Software and its types - Word-processing, Spreadsheet, Presentation Graphics, Data Base Management Software, Graphics, Browsers, E-mail clients, Report Writers etc., characteristics, Uses and examples and area of applications of each of them.

Computer Virus - working principles, Types of viruses, virus detection and prevention, viruses on network, Viruses on Windows and Linux.

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

Computer Applications in Business-Need and Scope, Computer Applications in daily life, Sales, Marketing, advertising, GIS, Multimedia, Computer Applications in Classes, Virtual Classrooms, Computer applications in Offices, Information System for Accounting-Cost and Budgetary Control, Marketing and Manufacturing, Computer Applications in Materials Management, Insurance and Stock-broking, Production planning and Control, Purchasing, Banking, Credit and Collection, Warehousing. Use of computers in common public servicesand e-governance.Various e-governance initiatives in India.

DCPA2 - OPERATING SYSTEMS

Fundaments of operating system, definition and need. Main Services of operating system, various types of operating system, (definition and characteristics), multitasking, multiprocessing, multiprogramming, real time, time sharing, parallel, network operating system, booting process, file system.

DISK OPERATING SYSTEMS (DOS) - Introduction, History & versions of DOS, DOS basics- Physical structure of disk, drive name, FAT, file & directory structure and naming rules, booting process, DOS system files.

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

External Commands - CHKDSK, XCOPY, PRINT, DISKCOPY, DISKCOMP, DOSKEY, TREE, MOVE, LABEL, APPEND, FORMAT, SORT, FDISK, BACKUP, EDIT, MODE, ATTRIB, HELP, SYS etc

WINDOWS - Introduction to Windows, its various versions and features. Hardware requirements for various versions of Windows. Working with Windows (XP or Windows 7)Windows concepts, Windows Structure, Desktop, Taskbar, Start Menu, Working with files and folders, create, copy, delete, renaming and moving files and folders, working with recycle bin-restoring deleted files, emptying the recycle bin, searching files and folders .My computer, formatting floppy disks, Using CDROM Disk and Dives.

Using Windows Accessories programs- Calculator, Notepad, Paint, WordPad, Character map, Paint, Command line.

Using Media Player, Sound Recorder, and VolumeControl. Taking Printout from programs, Printer Properties, Add fonts to Windows (Specially adding Hindi Fonts and using them), Setting up Regional and Language settings in Windows.

Advanced features of Windows -Managing Hardware & Software –Add or remove Hardware devices to/from computer, Add/remove programs, Using Scanner, Web camera, sharing of printers.

System Tools - Backup, Clipboard Viewer, Disk Defragmenter, Drive Space, Scandisk, System Information windows update.

Communication –Setting up Dial up Networking with Windows, Internet connection with Windows, Direct Cable Connection, Setting up TCP/IP properties, Hyper Terminal, Phone Dial ,Browsing the Web with internet explorer,communication through Outlook Express, Multiple Users Features of Windows. Creating and deleting user, changing user passwordetc. Accessibility Features of Windows.-Sharing Information between Programs,sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers - Understanding OLE - Embed/Link Using Cut and Paste and Embed/Link Using Insert Object - Manage Embedded/Linked Object.

DCPA3- SAFETY PRACTICES IN THE WORK ENVIRONMENT

Safety Signs &Colour at Work : Safety Signs - Cause for accidents, Safe attitudes; Safety Signs &Colour- Sign categories, Sign types.

First Aid & Artificial Respiration: First Aid - Introduction, First aid and Its aim, Recovery position, Cardiopulmonary resuscitation (CPR), Wound, Shock, Convulsion, Extensive burns, Minor burns and scalds, Chemical burns, Electric shock, Fracture,

First–aid box; Artificial Respiration - Respiration, Artificial respiration, Mouth to nose method of artificial respiration, Artificial respiration in case of cardiac arrest, Important points to note after giving artificial respiration to victims.

Safe Lifting and Carrying Techniques: Causes of injury, Types of injury and methods to prevent them, Points that make an objects/load difficult to carry, Preparation before lifting or shifting heavy loads, Correct body posture before beginning the lift in kinetic method of lifting , Manual lifting techniques using kinetic method, Shifting of working tables, Shifting of electronic equipments/instruments, Basic steps of safe lifting and handling.

Fire and Fire Extinguishers: Fire, Fuel, Heat, Oxygen, Controlled and uncontrolled fire, Controlling and extinguishing fire, Fire extinguishers, Types of fire extinguisher - water-filled extinguishers, foam, extinguishers, dry powder extinguishers, carbon dioxide type extinguishers, halon extinguishers, General procedure to be adopted in the event of a fire.

Safe Working Measure : Electric shock, action and treatments; Hazard identification, risk assessment and risk control; Workstation layout and ergonomic guidelines.

Managing Health and Safety at Work : Introduction, General office safety, Types of office accidents, Office hazard control, Office environment, Hazards from electrical equipments, Office safety procedures, Emergency action plan.

Personal Hygiene : Introduction, How to maintain good hygiene, How to ensure food safety, Grooming, What are the consequences of not maintaining good hygiene?

Public and Home Safety : Introduction, Safety at home, Activities that have a potential for accidents, Things that are normally used at home and have a potential for accidents, Public safety, Prevention.

Common Food Borne Diseases and Infections: Introduction, The Farm – beginning of the food chain, Food processing-preventing food-borne illness and improving quality, Transport and storage–safeguarding food, Food safety and retailing , Food safety in the home, Food borne diseases.

DCPA4 – MS OFFICE

MS Word Basics: Introduction to MS Office; its components, Introduction to MSWord; Features & area of use. Working with MS Word.; Menus & Commands; Toolbars & Buttons; Shortcut Menus, Wizards & Templates; Creating a New Document; Saving document, Saving as different format, Different Page Views and layouts; Applying various Text Enhancements; Working with – Styles,Text Attributes; Paragraph and Page Formatting- Using page border and watermark, Text Editing using various features, Bullets, Numbering, Auto formatting, word count, various page view options, Printing & various print options

Advanced Features of MS-Word: Spell Check, Thesaurus, Find & Replace; Headers & Footers ; Inserting – Page Numbers, Pictures, Files, Auto texts, Symbols etc.; Working with section breaks and page breaks, Working with Columns, Tabs & Indents; Creation & Working with Tables including conversion to and from text; Margins & Space management in Document; Adding References – footnotes, endnotes, and Table of contents, Insert drawing, Mail Merge, Envelops & Mailing Labels, protect and secure documents in MS Word, Working in different languages in MS Word. Using Unicode in MS Word, Insert WordArt and other objects like shapes, clipart, charts and SamrtArts, symbol in Document. Using Macros in Word- Record, edit and run macros.

MS Excel: Introduction and area of use; Working with MS Excel.; concepts of Workbook & Worksheets; Using Wizards; Various Data Types; Using different features with Data, Cell and Texts; Inserting, Removing & Resizing of Columns & Rows; Working with Data & Ranges; Different Views of Worksheets; Zooming, Column Freezing, Labels, Hiding, Splitting etc.; Using different features with Data and Text; Use of Formulas, Calculations using various type of functions-Logical, string, date & time, maths and other types; Cell Formatting including Borders & Shading; conditional formatting, sorting data items, Working with Different Chart Types; Printing of Workbook & Worksheets with various

options. Import and export excel sheets to/from various format, add headers and footers, using macros in excel sheet-Record, edit and run macros.

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, Insert WordArt and other objects like shapes, clipart, charts and SamrtArts, symbol in PowerPoint, Designing & Presentation of a Slide Show; Master slide, Adding custom animation and effects in your presentation, Add time to your slide, Slide Sorting, Printing Presentations, Notes, Handouts with print options, Package your presentation for CD.

DCPA5 - PROGRAMMING CONCEPTS & TECHNIQUES, PROGRAMMING IN FOXPRO

Programming Concepts

Introduction, Steps in program development, Problem identifications task, data analysis, input design, output identification and specifications, decision tables, algorithm, data validation.

Flowcharts, coding the program, debugging, testing, flowchart symbols, rules for making flowcharts, some examples of flowcharts, types of flowcharts, use of flowcharts, advantages and disadvantages of flowcharts.

Pseudo code – introduction, logical construction of Pseudo code, Advantages of using Pseudo code, Meta-code, Programming techniques-Top down and Bottom Up design and implementation, Modular design and Programming.Structured Programming, Three basic modules of structured programming, Iterative logic, Modular Design and programs.Testing and Debugging- Introduction, Testing process, debug, compiler and interpreters as debuggers, data definition languages, cohesion in modular design, Kinds of modules – sequential, selective and interactive.

FOXPRO - THE RDBMS FOR PC

FoxPro - Versions, features, requirement of Hardware and Software, FoxPro - Menu System, Working with FoxPro, Creating Database File Some common operations on data-CREATE, LIST, APPEND, CLOSE, QUIT, FoxPro - Data Types

VIEWINING AND EDITING DATA

Data Displaying and Monitoring Commands - DISPLAY, LIST, LOCATE, EDIT, CHANGE, BROWSE, REPLACE, DELETE, RECALL, PACK (All Commands with various Options), MODIFY STRUCTURE, MEMO FIELD AND FILE UTILITIES - File utilities in FoxPro - 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, Rushmore Technology

PRINTING REPORTS AND LABELS

FoxPro Report - its creation, features & Utilities, Preview, Printing, Custom Report, grouping &Sub grouping.

FoxPro Label - Designing & Printing

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 AND FUNCTIONS

Arithmetic Operations, Mathematical Functions, Mathematical, Commands, Statistical Functions.

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

ERROR CONDITIONS AND PROGRAM DEBUGGING AIDS

Common Error Massages, Debugging techniques and commands

MULTIPLE DATA FILES

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, @_EDIT, _SAY_GET_READ,Creating Box & Lines, User Define Functions, Custom Screen, Designing and their Use, FoxDoc for documentation.

DCPA6 - PROGRAMMING IN C++

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 ,Turbo C++ IDE Creating the Source File, Compiling, Linking and executing.

Tokens, Expressions And Control Structures:- Introduction, Tokens, Keywords, Identifiers, Basic Data types, User Defined Data Types, Derived Data Types, Symbolic Constants, Type Compatibility, Declaration of Variables, Dynamic Initialization of Variables, Reference Variables, Operators in C++, Conditional statements, various loops in C++, Arrays, string processing in C++, Scope ResolutionOperator, Member Dereferencing Operators, Manipulators, Type Cast Operator, Expressions and Implicit Conversions, Operator Precedence, Control Structures.

Classes And Objects:-Specifying a Class, Defining Member Functions, Making an Outside Function Inline, Nesting of Member Functions, Private Member Function, Arrays within a Class, Memory Allocation for Objects, Static Data Member, Static Member Functions, Arrays of Objects, Object asFunction Arguments.

Constructors andDestructors: -Introduction, Constructors, Parameterized Constructors, Multiple Constructors with Default Arguments, Dynamic Initializations of Objects, Copy Constructors, Dynamic Constructors, Destructor.

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

Operator Overloading And Type Conversions :- Introduction, Defining Operator Overloading, Overloading Unary Operators, Overloading Binary Operators Using Friends, Manipulation of strings using Operators, Rules for OverloadingOperators, Type conversions.

Inheritance : Extending Classes :- Introduction, Defining Derived Classes, Single Inheritance, Making a Private Member Inheritable, Multilevel Inheritance, Multiple Inheritance, Hierarchical Inheritance, Hybrid Inheritance.

Pointers, Virtual Functions And Polymorphism :- Compile time Polymorphism, run time polymorphism, Pointers to Objects, This Pointer, Pointers to Derived Classes, Virtual Functions, Pure Virtual Functions.

DCPA7-COMMUNICATION AND PERSONALITY DEVELOPMENT

Grammar:

Parts of Speech, - Articles and Determines, Noun and Pronoun, Adjective and Adverb, Verb, Conjunctions and Prepositions, Tenses, Punctuations, Active & Passive Voice, Type of Sentences (simple, complex, compound), Reported Speech (direct and indirect), Types of Sentences, Prepositions, -Gerunds, -Infinitives.

Written English:

Advance Writing Skills (formal, informal paragraph, story, letter, application.

Personality development: Soft Skills Development, Body Language, Behavioral and Symptomatic Soft Skills, Etiquette and Manners, Positive Thinking, Motivation, Goal setting, Team building, Self Confidence, Leadership Skills, Time Management.

DCPA8–INTRODUCTION TO PROGRAMMING IN VISUAL BASIC.NET

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.

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.

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

GUI Programming with Windows Form: Textbox, Label, Button, List box, Combo box, Checkbox, Picture Box, Radio Button, Panel, scroll bar, Timer, List View, Tree View, toolbar, StatusBar, There Properties, Methods and events. OpenFile Dialogs, Save FileDialog, FontDialog, ColorDialog, And Print Dialog. Link Label. Designing menus : Context Menu, access &shortcut keys.

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. COM technology, advantages of COM+, COM & .NET, Create User control, register User Control, access com components in .net application.

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.

DCPA9 - DTP &PAGEMAKER

Introduction to traditional printing methods, history of DTP, advantages of DTP over traditional printing methods, uses of DTP, hardware and software requirements of DTP, MAC Vs Windows platform, a brief introduction to some major software of the DTP field.

Fonts & Typefaces – introduction, typefaces families, types of fonts – Bit Stream, TTF, ATM, PFB/PFM, Open Type etc. Typeface managers – ATM, Obtaining & Install new fonts in your system, Factors of selecting proper typefaces and fonts. Indian language font, Unicode fonts, Impact and use of Normal, Bold, Italic, Underline, Subscript, Superscript, Outline and Shadow effect on font.

Text Generation program for DTP – ASCII Text editor and Unicode Text editor, Use of Word Processor, advantages of Word processor over plain text editor. Indian languages text input methods. Keyboard layout for Indian languages. Optical Text Recognition (OCR) software introduction. Effect of Alignments, line spacing, word spacing, paragraph spacing, Text in columns, Orphan and Widow, and Hyphenation on text and control mechanism.

Concepts of Proof reading, advantages of proof reading, Proof reading symbols and their use.

Orientation and size – Importance of paper size and orientation in publishing, common paper size and orientation with relation of output devices.

Graphics & Images in Publishing - Effect of using images and graphics in your publication. Vector/ raster graphics, methods of capturing images and graphics in computer – scanner and digital camera, process of capturing images using scanners and camera. Importance of resolutions of pixels, Types of images file format – BMP, TIF, GIF, JPEG, etc with their advantages & limitations. A brief introduction to Image capturing and editing software, use of filters and effects. Use of clipart and icons. A brief introduction to vector graphics software.

Printers for DTP – Laser printer basics, languages of laser printers – Postscripts and PCL, Advantages of PS over Non-PS printers. Use of butter papers, mirror image printing – use and effect.

Color theory for DTP – Grayscale, RGB, CYMK and HSB color models – basics and their use.

Introduction, features of PageMaker, Versions of PageMaker, Starting PageMaker, Understanding Interface, Create a New Document, Document Setup, Writing Text, rules and guidelines, , display modes of pages, Saving Document, Closing PageMaker.

Drawing Text Box, Writing Text, Insert Pages, and Place Text, Format Text, Reverse Text, Align Text, Insert and delete pages. Flow Text in linked text box. Using toolbox, setting tabs. Using Toolbar, Importing text and graphics, wrapping text around picture, Paragraph level formatting, multiple publication windows, Using Story Editor, Editor an existing story, creating a new story, uses story editor efficiently.

Checking spelling, Find and replace, View page and zooming, Grouping and arranging objects, Using styles, using predefined styles, creating new style, using style effectively, Using Document Master Pages

Working with columns, working with tables, layers and tables, redefining objects, ways to geometrical figures, coloring texts and geometrical figures, mask objects, master pages and pagination, numbering of pages, creating header and footer, summary and index, combining documents, creating a book, printing a book, printing and distributing publications,

Creating different type of document using PageMaker - Visiting cards, Letterheads, Magazines, 2 and 3 fold brochures, Marriage cards and envelopes, Technical documents, Banner etc.

Printing document as PostScript, EPS and PDF format.

DCPA10 - INTRODUCTION TO WEB& INTERNET TECHNOLOGY

Internet – History, WWW and HTTP evaluation, services offered by Internet – e-mail, WWW, FTP, telnet, News and USENET, Gopher, WAIS, IRC, VOIP, WAP, Webcasting and Podcasting, e-com, m-com, Social Networking.

Connectivity method to Internet – Dialup, DSL, ISDN, VSAT, RFID, Broadband, leased line- advantages and limitations of each method. Setting in Windows/Linux to connect the Internet. Internet addressing basics, domain names basics, DNS, DHCP, TCP/IP protocols, URIs and URLs, Domain name, process of obtaining domain names – TLD and Sub domains, Indian Domain names, Web servers – functions and capabilities, Introduction to PWS, IIS, Apache etc.

Browsers – features, services offered by browsers, browsers evaluation, extensions and plug-ins for browsers, some important plug-ins introduction like – flash, java, silver light, etc. features of some major browsers – IE, Firefox, and Google Chrome.

E-mail- Process, obtaining an e-mail address, types of email services – Web based and POP3. Understanding e-mail address, SMTP and MIME protocols, Using web based and pop3 e-mail – creating a message, sending a message, CC, BCC, replay, forward, reply to all, attach a document, add signature to mail, spam mails handling, junk mails, etc. email clients software – installation and configuration. Configuring and Using Outlook Express.

File Transfer using FTP – FTP Process fundamentals, How to use FTP using browsers, FTP using client software like – Cute FTP, WS FTP, FileZilla etc. File formats and Transfer types, Anonymous and non- anonymous FTP.

Telnet – Features, session, using telnet with browsers, Client programs, with Windows.

UseNet – Features, differences between e-mails and newsgroups, various types of Usenet groups, Usenet protocols, major newsgroups, process of joining a newsgroup of your interest. Start your own newsgroup. Using browser as the newsgroup reader.

Gopher, WAIS, ARICHE and Veronica – features, how to use these services, their features.

Internet Relay Chat – Its features, use, IRC servers, Web based and telnet based chats, Chatting programs, Chat commands, using some web based IRC program like yahoo messenger and Google talk etc.

Web Servers – features, services offered by web servers, various ports, introduction to Unix/Linux and Windows based web servers – PWS, IIS, Apache, and Tomcat etc. Hosting directories, Concepts of Virtual Directires, Types of files used – HTML, ASP, JSP, .PHP, .cgi, .pl, .aspx, etc., need of .NET framework on servers, FrontPage extension. Process of transfer files on Web servers using FTP.

Firewalls – Uses working and applications. Setting up firewall on your system.

Data Security on Internet – Introduction to data security on Internet, Importance of password handling, Encryption technology, digital security, digital certificate, SSL and digital watermark.

Languages of Internet – a brief introduction to HTML, DHTML, XML, .NET, PHP, JAVA, JavaScript, AJAX, VB.Net, C# and CSS (Brief intro, features, at least 2 examples and explanation of each.

DCPA11 - INTRODUCTION TO ENTREPRENEURSHIP

Introduction to Entrepreneurship – Introduction and concept of Entrepreneurship, Theory of Entrepreneurship – Entrepreneurship in developing countries, Entrepreneurship stimulation, Entrepreneurship and economic growth, Entrepreneurship and Economic system, various theories of Entrepreneurship, Growth of Entrepreneurship – Role of Entrepreneurship, Growth of Entrepreneurs, Prospects for Entrepreneurship

Nature and Importance of Entrepreneurship – Entrepreneurship Qualities, Entrepreneurship Functions, Entrepreneurship Vs Entrepreneurs, Opportunity matrix, Entrepreneurship Decision, Role of Entrepreneurship, Growth of Entrepreneurship, Classification and types of Entrepreneurship – Business Entrepreneurs, Types of Entrepreneurship, Entrepreneurship and Motivation, Growth and Entrepreneurship, Nature and scope of management – Scope of Management, Meaning of Management, Characteristics of Management, Objectives of Management, Management as a profession, Organization and Management, Branches of Management, Importance of Management, managerial Skills, Planning – Concepts, processes and types – Importance of Planning, Characteristics of Planning, a Good Plan, Advantages of Planning.

Concepts of an Organization – Organization Concepts, organization theory, formal and informal organization, significance of organization, the organization process, analysis of organization, nature of organization, organization as an art, group dynamics, organization development.

Motivation – Introduction, Meaning, Kinds of Motivation, MC Gregor's Theory X and Theory Y, Coordination, Need Hierarchy theory of Motivation, Motivational Techniques, Financial and Non-financial Incentives.Leadership – Introduction, Characteristics of leadership, great man theory of leadership, role of leadership, leadership styles, techniques of leadership, functions of leadership, qualities of leadership, process of leadership, develop voluntary cooperation, Communication – Introduction, Features of communication, Need, Communication Process, communication Process models, Gestural or non verbal communication, Models of Grapevine, Communication Networks, Barriers of Communication, Effective communication, Improve written communication.

Accounting in an small enterprise – Need, How accounts maintained?, Objectives of accounting, Ledger, Trial Balance, Final accounts Balance sheet etc.

Entrepreneurship development institutions -

AISECT model of Entrepreneurship

How to setup and AISECT Centre

Training for self employment

DCPA12 – PROJECT

All the candidates of DCPA 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.

- Select the project.

- Collect the information related to project

- Identify the technology in terms of front end, back end, hardware tools used, software tool used.

- Write the brief synopsis for project

- Get the synopsis approved from project in charge

- Proceed for the project using system development life cycle

- System development life cycle contain the steps like in to gathering designing, coding, development, testing, dispatched.

- Demonstrate the complete project through power point presentation to project in charge