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PROGRAM-GUIDE

DIPLOMA IN COMPUTER PROGRAMMING AND APPLICATIONS (DCPA)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
## Diploma in Computer Programming and Applications (DCPA)

### Contents and Scheme of Examination

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<th>Assignments</th>
<th>Key Learning Outcomes</th>
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| DCPA1       | Fundamentals of Computers & Information Technology        | 3      | 100         | 70     | 28              | 30          | • Understand functions of components of a computer system, storage devices & their physical structure & working.  
              | सूचना तकनीक एवं कम्प्यूटर से परिचय           |        |             |        |                 |            | • Understand operating system & file system  
              |                                                             |        |             |        |                 |            | • Understand & use computer networks                                                  |
| DCPA2       | Operating System (DOS, Windows)                            | 2      | 100         | 50     | 20              | 30          | • Understand booting process of OS & file system, installation  
              | ऑपरेटिंग सिस्टम (डीओएस, विंडोज) |        |             |        |                 |            | • Understand Windows: accessories & system tools.  
<pre><code>          |                                                             |        |             |        |                 |            | • Understand advanced features of Windows &amp; Setup Network connection.                 |
</code></pre>
<p>| DCPA3       | Safety Practices in the Work Environment                   | 1      | 100         | 50     | 20              | 30          | • Familiarity with electrical safety, fire safety, first aid, food safety, primary health and basic hygiene |
| DCPA4       | MS-Office (Word, Excel, PowerPoint)                        | 3      | 100         | 50     | 20              | 30          | • Understand creation, &amp; printing a document/presentation/ &amp; excel sheet in MS Office. |</p>
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<tr>
<th>Course Code</th>
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<th>Practical</th>
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<th>Notes</th>
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</table>
| DCPA5       | Programming Concepts & Techniques and Programming in Foxpro | 2       | 100   | 50      | 20  | 20     | 8         | 30    | 12    | Ability to use advanced features in MS Word like inserting word art, shapes, clipart, charts, smart arts, symbols, graphs etc. in a document/slide.  
|             |                     |         |       |         |     |        |            |       |       | Competency in using various formulas, function in Excel.  
|             |                     |         |       |         |     |        |            |       |       | Competency in importing & exporting excel sheets to/from various formats. |
| DCPA6       | Programming in C++                                      | 3       | 100   | 50      | 20  | 20     | 8         | 30    | 12    | Understand the difference between procedure oriented programming & OOPs.  
|             |                     |         |       |         |     |        |            |       |       | Ability to construct, compile, link & execute the C++ programs.  
|             |                     |         |       |         |     |        |            |       |       | Understand function declaration and definition pointer. |
| Semester II |                                                   |         |       |         |     |        |            |       |       |                                                   |
| DCPA7       | Communication And Personality Development            | 1       | 100   | 70      | 28  | -      | -         | 30    | 12    | Basic communication skills  
|             |                     |         |       |         |     |        |            |       |       | Personality grooming |
| DCPA8       | Introduction to Programming in Visual Basic .Net     | 3       | 100   | 50      | 20  | 20     | 8         | 30    | 12    | Understand the features & architecture of .NET framework and use the various Windows application development tools.  
|             |                     |         |       |         |     |        |            |       |       | Familiarity with visual studio, project basics & IDE of VB. .NET.  
|             |                     |         |       |         |     |        |            |       |       | Work with VB.NET language  
|             |                     |         |       |         |     |        |            |       |       | Database programming with ADO.NET |
| DCPA9       | DTP and Page Maker                                    | 3       | 100   | 50      | 20  | 20     | 8         | 30    | 12    | Recognition of different traditional printing methods.  
|             |                     |         |       |         |     |        |            |       |       | Understand format character & paragraph, placing image behind text.  
|             |                     |         |       |         |     |        |            |       |       | Ability to install & use different fonts & typeface.  
|             |                     |         |       |         |     |        |            |       |       | Ability to design cards, letterheads, magazines etc. |
| DCPA10      | Introduction to Web and Internet Technology           | 2       | 100   | 50      | 20  | 20     | 8         | 30    | 12    | Understand computer network concept (topologies, layers)  
<p>|             |                     |         |       |         |     |        |            |       |       | Narrate evolution of internet, WWW- history &amp; working. |</p>
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<tr>
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<td>DCPA11</td>
<td>Introduction to Entrepreneurship</td>
<td>2</td>
<td>100</td>
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<td>उद्यमिता से परिचय</td>
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<td>-</td>
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- Understand basics of web browsers, concepts of search engines and web protocols.
- Familiarity with the use of FTP.
- Familiarity with Unix/Linux & Windows based web servers.
- Understand internet languages like: HTML, DHTML, XML, .NET, PHP, JAVA, Java Script, AJAX, VB.NET, C# & CSS.
- Understanding of entrepreneurship development concepts.
- On the job skill by working with a software/web development establishment office/company.

Note: For a PASS - A Student would require to secure 40% for both Theory and Practical.

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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
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-brokering, Production planning and Control, Purchasing, Banking, Credit and Collection, Warehousing. Use of computers in common public services and e-governance. Various e-governance initiatives in India.

**DCPA2 - OPERATING SYSTEMS**

Fundamentals 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


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

Using Media Player, Sound Recorder, and Volume Control. 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 password etc. Accessibility Features of Windows. Sharing Information between Programs, sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers.
Understanding OLE - Embed/Link Using Cut and Paste 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 SmartArts, 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 SmartArts, 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.


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
VIEWING 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 Messages, 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 as Function Arguments.

Constructors and Destructors: - 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 Overloading Operators, 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.


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. OpenFileDialog, Save FileDialog, FontDialog, ColorDialog, And Print Dialog. Link Label. Designing menus : Context Menu, access &shortcut keys.


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.


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.


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,

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.


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**


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
# Counseling and Study Structure

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Hour(s) of Study</th>
<th>Counseling and Study Structure (hours)</th>
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<td>Face to Face Counseling</td>
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<td>1</td>
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<td>Fundamental of Computers &amp; Information Technology</td>
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<tr>
<td>2</td>
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<td>Operating System (DOS, Windows)</td>
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<td>Safety Practices in the Work Environment</td>
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<td>MS-Office (Word, Excel, PowerPoint)</td>
<td>3</td>
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<td>DCPA 5</td>
<td>Programming Concepts &amp; Techniques and Programming in FoxPro</td>
<td>3</td>
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<tr>
<td>6</td>
<td>DCPA 6</td>
<td>Programming in C++</td>
<td>3</td>
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<td>7</td>
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<td>Introduction to Web and Internet Technology</td>
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<td>Subject Name</td>
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<td>S01 - Fundamentals of Computers &amp; Information Technology</td>
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<td>Operating Systems (DOS, Windows)</td>
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<td>S05 - Programming Concepts and Techniques S07 - FoxPro</td>
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<td>S09 - DTP &amp; PageMaker</td>
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<td>S27 - Internet, S37 - HTML S40 - Front Page</td>
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<td>Introduction to Entrepreneurship</td>
<td>S56 - Introduction to Entrepreneurship</td>
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<td>Project</td>
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PROGRAM-GUIDE

DIPLOMA IN COMPUTER APPLICATIONS (DCA)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Diploma in Computer Application (DCA)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Marks</th>
<th>Theory</th>
<th>Practical Marks</th>
<th>Assignments</th>
<th>Key Learning Outcomes</th>
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</thead>
</table>
| 1DCA1       | Fundamentals of Computers & Information Technology       | 3      | 100         | 70     | 28              | 30          | • Understand functions, components of a computer system, storage devices & their physical structure & working.
<p>|             | सूचना तकनीक एवं कम्प्यूटर से परिप्रेक्ष्य          |        |             |        |                 |             | • Understand operating system &amp; file system.                                            |
|             |                                                           |        |             |        |                 |             | • Understand &amp; use computer networks.                                                  |
| 1DCA2       | Operating System (DOS, Windows, Linux)                    | 3      | 100         | 50     | 20              | 30          | • Understand booting process of OS &amp; file system.                                       |
|             | ऑपरेटिंग सिस्टम (डॉस, विंडोज, लाइनेक्स)            |        |             |        |                 |             | • Understand Windows: accessories &amp; system tools.                                        |
|             |                                                           |        |             |        |                 |             | • Understand advanced features of Windows &amp; Setup Network connection.                  |
|             |                                                           |        |             |        |                 |             | • Understand basic working of DOS &amp; Linux Operating System.                            |
| 1DCA3       | Computer in Office-I (MS-Word &amp; MS-Excel)                 | 2      | 100         | 50     | 20              | 30          | • Understand creation, printing a document &amp; excel sheet in MS Office.                  |
|             | एम.एस. ऑफिस (वर्ड, एक्सेल)                              |        |             |        |                 |             | • Ability to use advanced features in MS Word like inserting word art, shapes, clipart, charts, smart arts, symbols, graphs etc. in a document/slide. |
|             |                                                           |        |             |        |                 |             | • Understand using various formulas, function in Excel.                                |
|             |                                                           |        |             |        |                 |             | • Understand importing &amp; exporting excell sheets to/from various formats.              |</p>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>1DCA4</td>
<td>Computer in Office-II (MS-PowerPoint, MS-Access &amp; MS Outlook)</td>
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<td>• Creation, printing &amp; ability to use advanced features in Power Point like inserting word art, shapes, clipart, charts, smart arts, symbols, graphs etc. in a in Power Point.</td>
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<td>• Manage Database in MS Access</td>
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<td>• Manage and Configure Your Email A/c in Outlook.</td>
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<td>1DCA5</td>
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<td>1</td>
<td>100</td>
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<td>• Personality grooming</td>
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<td></td>
<td>• Familiarity with electrical safety, fire safety, first aid, food safety, primary health and basic hygiene</td>
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<td>Introduction to Internet and Web Technology</td>
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<td>• Understand computer network concept (topologies, layers)</td>
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<td>• Narrate evolution of internet, WWW- history &amp; working.</td>
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<td>• Understand basics of web browsers, concepts of search engines and web protocols.</td>
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<td>• Familiarity with the use of FTP.</td>
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<td>• Familiarity with Unix/Linux &amp; Windows based web servers</td>
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<td>• Know internet languages like: HTML, DHTML, XML, .NET, PHP, JAVA, Java Script, AJAX, VB.NET, C# &amp; CSS.</td>
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<td>2DCA2</td>
<td>Introduction to Financial Accounting with Tally</td>
<td>3</td>
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<td>• Understand the basic concepts of accounting and inventory Tally configuration.</td>
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<td>• Understand working with accounts books, purchase and journal registers.</td>
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<td>• Ability to analyze: - stock group and item, stock category, ageing.</td>
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<td>• Understand cheque printing, printing options, different printing formats</td>
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<td>• Understand the features &amp; architecture of .NET framework and use the various Windows application development tools.</td>
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<td>• Familiarity with visual studio, project basics &amp; IDE of VB.NET.</td>
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<td>Ability to work with VB.NET language</td>
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<td>Understand database programming with ADO.NET</td>
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<td>Understand programming concept coding, debugging &amp; testing of program.</td>
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<td>Understand designing FoxPro reports /label &amp; printing them</td>
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<td>Ability to identify common error messages &amp; apply debugging techniques &amp; commands</td>
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**Note:** For a PASS - A Student would require to secure 40% for both Theory and Practical.

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DETAILED SYLLABUS

SEMESTER I

1DCA1 - FUNDAMENTALS OF COMPUTERS AND INFORMATION TECHNOLOGY


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


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


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


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


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


1DCA2 - OPERATING SYSTEMS

Fundamentals of operating system, definition and need. Main Services of operating system, various types of operating system, (definition and characteristics), multtasking, 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

Using Windows Accessories programs- Calculator, Notepad, Paint, WordPad, Character map, Paint, Command line.
Using Media Player, Sound Recorder, 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 password etc. Accessibility Features of Windows. - Sharing Information between Programs, sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers - Understanding OLE - Embed/Link Using Cut and Paste and Embed/Link Using Insert Object - Manage Embedded/Linked Object.

LINUX - Linux introduction, Basic Features, Advantages, Features of Linux, Basic Architecture of Unix/Linux system, Kernel, Shell, Linux File system, Linux standard directories. Partitioning the Hard drive for Linux, Installing the Linux system, System, startup and shut-down process, How Linux works, Linux GUI, Linux Desktop, Creating files in Linux.
Essential Linux commands: Understanding shells, Commands for files and directories cd, ls, cp, md, rm, mkdir, rmdir, pwd, file, more, less, creating and viewing files using cat, file comparisons – cmp&comm, View files, disk related commands, checking disk free spaces.

**1DCA3 – Computers in Office – I**  
*(MS Word & MS Excel)*

**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 SmartArts, 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.

**1DCA4 – Computers in Office – II**  
*(MS PowerPoint, MS Access & MS Outlook)*

**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 SmartArts, 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.

**MS-Access – Getting Started, Adding and Changing Data, Simple Queries, Creating Append Queries, Creating QBE Queries, Multi-table QBE Queries, SQL Queries.**

**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.
1DCA5- COMMUNICATION SKILLS & PERSONALITY DEVELOPMENT

English Language - Listening, Speech, Pronunciation, Reading, Spelling, Writing Right

Nouns: Countable and Uncountable, Pronouns: Personal, Relative and Others, Articles

The Parts of Speech, The Prepositions, Clauses: Coordinate, Subordinate, Relative Adverbs, Adjectives and Adjective Phrases, Verb

The Model Auxiliaries, Adverb, Adverb Phrases, Comparisons and Intensification, Linking Devices, Subject Verb Agreement, Tenses, Common Errors, Word Building, Vocabulary

Developing Ability of Question and Answer, Body Language and Its Use in Speaking, Group Discussions, Interview Skills

Composition - Making a Technical Report, E-Mails and Text Messages Composing, Letter Writing, Paragraph Writing, E-mail Writing, Writing Resume, Writing a Cover Letter

**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

Introduction to Personality a) Basic of Personality b) Human growth and Behavior c) Theories in Personality d) Motivation

Communication skills and Personality Development a) Intra personal communication and Body Language b) Interpersonal Communication and Relationships c) Leadership Skills d) Team Building and public speaking

Techniques in Personality development I a) Self confidence b) Mnemonics c) Goal setting d) Time Management and effective planning

Techniques in Personality Development II a) Stress Management b) Meditation and concentration techniques c) Self hypnotism d) Self acceptance and self growth

1DCA6 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.

**DETAILED SYLLABUS**

**SEMESTER II**

**2DCA1 – INTERNET & WEB TECHNOLOGY**

**Introduction To 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 wais, basic internet terminologies, net etiquette, applications, commerce on the internet, governance on/through the internet, impact of internet on society

**TCP/IP - Internet Technology And Protocols** - introduction, switching technology, internet protocols, overview of TCP/IP reference model, introduction to TCP/IP, routers, internet addressing scheme

**Internet Connectivity** - connectivity types, level one connectivity, level two connectivity, level three connectivity, hardware requirements, modems, narrow-band/phone-line dialup modems, software requirements, modem configuration, telephone line options, making a dial-up connection, protocol options, service options, news services, desktop alerts

**Internet Network** - computer networks, applications of networks, common terminologies, interoperability, network security, the need for security, common threats, security barriers in network pathways, network components, communication media, network devices, types of network: client/server & peers, addressing in internet, domain name system (DNS), domain name and their organization, network topology, internet vs. intranet

**Services Of Internet (Definition And Functions)** - introduction, file transfer protocol, ftp related terminologies, ftp servers and authentication, public and private software services, ftp clients, types of ftp client software, displaying files, remote login, chat programs, connecting to a server, search engines

**Electronic Mail** - introduction, what is an e-mail?, email networks and servers, merits of e-mail, limitations, e-mail protocols, structure of an e-mail, e-mail address, Microsoft internet explorer and outlook express, applying stationary, web based emails, working with yahoo, starting the mail program, creating signature in outlook express, creating signature in yahoo, email encryption, why email encryption?, digital certificate

**Current Trends On Internet** - current trends of internet, languages used on the internet, internet phones, internet video / internet tv, streaming video & audio, collaborative computing, e-commerce, technical and organizational aspects

**Web Publishing** - overview, SGML (standard generalized markup language), what is the need of a website?, types of web sites, components of web publishing, domain name planning and registration, choosing a web host and signing up for an account, web hosting, web design and development, testing your website, promotion of the site, registering your site with a search engine, publishing tools, html editor, image editor, program to transfer your files to a web server, uploading web pages using CuteFTP
World Wide Web- introduction, evolution of the www, basic features, mechanism of the world wide web, search and meta-search engines, searching the web, using Boolean operators in your searches, using advanced, using a Metasearch engine, site specific search tools, web protocols, hyper text transfer protocol (http), web server

Browsers, introduction, www web browsers, Mozilla Firefox browser, the opera browser, google chrome, what are bookmarks?, adding folders, favorites, deleting favorite folders and pages, history, progress indicator, customizing internet explorer, turning off graphics to display all web pages faster, customizing the toolbar, copying, saving and printing in internet explorer, printing an image from a web page, printing a web page, cookies, what is cache setting ?, internet explorer, the standard toolbar, internet explorer keyboard shortcuts

Hyper Text Markup Language Programming Basics - introduction, html editors, elements of html, definition lists, compact attribute, nested list, type attribute, html links, using alt attribute, background graphics, html document tables, creating tables within tables, html frames, html rules, introduction of multimedia, meaning of multimedia, what is multimedia?, identifying multimedia elements, audio on the web, video on the web

Introduction To Interactivity Tools- overview, what is ASP?, functions of asp, the basic syntax rule, writing output to a browser, adding some html to the text, declaring a variable in asp, declaring an array in asp, what is VBScript?, java, features of java, starting with java, Javascript and java, syntax and conventions, FrontPage, introduction to flash, installation of flash MX, creating simple animation for the web, working with layers in flash, masking in flashmx, bouncing effect in flash, to create motion tween, flash ripple effect

Internet Security Management Concepts, Information Privacy And Copyright Issues -overview, basic security concepts, security events, measures for check threats, firewalls, monitoring tools, security analysis tools, cryptography, information privacy, copyrights and the internet, copyright legislation in India, key points of copyright, encryption & decryption - cryptography, terminology

Firewalls - firewalls, firewall design principles, firewall attributes, firewall strengths and weaknesses, types of firewalls, comparison of firewall types, DMZ DNS server, VLAN

2DCA2 - INTRODUCTION TO FINANCIAL ACCOUNTING WITH TALLY


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 Are, 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


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


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

2DCA3 - PROGRAMMING WITH VISUAL, BASIC.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?


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


**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


**Graphics In VB.NET** - Introduction, Service of GDI+, Using GDI+ Managed 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

**2DCA4 - DATABASE HANDLING WITH FOXPRO**

**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

**VIEWWINING 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 & Subgrouping.
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.

2DCA5 - 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.


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

2DCA6 – PROJECT

All the candidates of DCA 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.
# Counseling and Study Structure

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<td>Computer in Office-I (MS-Word &amp; MS-Excel)</td>
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<td>4</td>
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<td>Computer in Office-II (MS-PowerPoint, MS-Access &amp; MS Outlook)</td>
<td>1DCA4 Computer in Office-II (MS-PowerPoint, MS-Access &amp; MS Outlook)</td>
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<td>Communication Skills &amp; Personality Development</td>
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<td>Safety Practices in the Workplace</td>
<td>S69 Safety Practices, Primary Health &amp; Personal Hygiene</td>
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**Semester II**

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<tr>
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PROGRAM-GUIDE

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION (PGDCA)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
### Post Graduate Diploma in Computer Application (PGDCA)

<table>
<thead>
<tr>
<th>Courses</th>
<th>Duration</th>
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<tr>
<td>Contents and Scheme of Examination</td>
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#### Key Learning Outcomes
- Understand functions, components of a computer system, storage devices & their physical structure & working.
- Understand operating system & file system
- Understand & use computer networks

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<thead>
<tr>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Marks</th>
<th>Theory</th>
<th>Practical Marks</th>
<th>Assignments</th>
<th>Key Learning Outcomes</th>
</tr>
</thead>
</table>
| 1PGDCA1     | Fundamentals of Computers & Information Technology | 3      | 100         | 70     | 28              | 30          | 12        | • Understand booting process of OS & file system, installation, Windows: accessories & system tools, advanced features of Windows & Setup Network connection.  
• Creation, & printing a document/presentation/ & excel sheet in MS Office.  
• Ability to use advanced features in MS Word like inserting word art, shapes, clipart, charts, smart arts, symbols, graphs etc. in a document/slide.  
• Understand using various formulas, function, importing & exporting excel sheets to/from various formats. |
| 1PGDCA2     | Windows & MS-Office (MS-word, MS-excel &Power Point,Outlook ) | 3      | 100         | 50     | 20              | 30          | 12        | • Understand booting process of OS & file system, installation, Windows: accessories & system tools, advanced features of Windows & Setup Network connection.  
• Creation, & printing a document/presentation/ & excel sheet in MS Office.  
• Ability to use advanced features in MS Word like inserting word art, shapes, clipart, charts, smart arts, symbols, graphs etc. in a document/slide.  
• Understand using various formulas, function, importing & exporting excel sheets to/from various formats. |
| 1PGDCA3     | Programming Methodology | 3      | 100         | 50     | 20              | 30          | 12        | • Understand programming concept coding, debugging & testing of program. |
| Course Code | Course Name                                      | Credits | Theory | Practical | Assessment | Weekly Hours | Duration (Weeks) |
|-------------|-------------------------------------------------|---------|--------|-----------|------------|--------------|-----------------|------------------|
| 1PGDCA4     | Computer Network & Internet                     | 3       | 100    | 50        | 20         | 30           | 12              |                  |
|             | नेटवर्क एवं इंटरनेट                               |         |        |           |            |              |                 |                  |
|             | • Understand computer network concept           |         |        |           |            |              |                 |                  |
|             | (topologies, layers), evolution of internet,    |         |        |           |            |              |                 |                  |
|             | WWW, history & working                          |         |        |           |            |              |                 |                  |
|             | • Understand basics of web browsers,            |         |        |           |            |              |                 |                  |
|             | concepts of search engines and web             |         |        |           |            |              |                 |                  |
|             | protocols.                                     |         |        |           |            |              |                 |                  |
|             | • Understand internet languages like: HTML,     |         |        |           |            |              |                 |                  |
|             | DHTML, XML, .NET, PHP, JAVA, JavaScript, VB.NET,|         |        |           |            |              |                 |                  |
|             | C# & CSS.                                       |         |        |           |            |              |                 |                  |
| 1PGDCA5     | Communication Skills and Personality Development| 1       | 100    | 70        | 28         | 30           | 12              |                  |
|             | कम्यूनिकेशन एवं व्यक्तिगत विकास                        |         |        |           |            |              |                 |                  |
|             | • Basic communication skills                    |         |        |           |            |              |                 |                  |
|             | • Personality grooming                          |         |        |           |            |              |                 |                  |
| 1PGDCA6     | Safety Practices in the Work Environment         | 1       | 100    | 50        | 20         | 30           | 12              |                  |
|             | कार्यसरिख में सुरक्षा प्रबन्ध                          |         |        |           |            |              |                 |                  |
|             | • Familiarity with electrical safety, fire      |         |        |           |            |              |                 |                  |
|             | safety, first aid, food safety, primary health  |         |        |           |            |              |                 |                  |
|             | and basic hygiene                               |         |        |           |            |              |                 |                  |

Semester II

<p>| Course Code | Course Name                                      | Credits | Theory | Practical | Assessment | Weekly Hours | Duration (Weeks) |
|-------------|-------------------------------------------------|---------|--------|-----------|------------|--------------|-----------------|------------------|
| 2PGDCA1     | Object Oriented Programming with C++            | 3       | 100    | 50        | 20         | 30           | 12              |                  |
|             | ऑब्जेक्ट ऑरिएंटेड प्रोग्रामिंग                       |         |        |           |            |              |                 |                  |
|             | • Understand the difference between              |         |        |           |            |              |                 |                  |
|             | procedure oriented programming &amp; OOPs           |         |        |           |            |              |                 |                  |
|             | • Ability to construct, compile, link &amp; execute |         |        |           |            |              |                 |                  |
|             | the C++ programs.                               |         |        |           |            |              |                 |                  |
|             | • Understand function declaration and           |         |        |           |            |              |                 |                  |
|             | pointer.                                       |         |        |           |            |              |                 |                  |
| 2PGDCA2     | RDBMS and SQL                                   | 2       | 100    | 50        | 20         | 30           | 12              |                  |
|             | डी.बी.एम्स. एवं एस. लेखन एवं एस.                 |         |        |           |            |              |                 |                  |
|             | • Understand RDBMS concepts &amp; drawing E-R       |         |        |           |            |              |                 |                  |
|             | diagram                                        |         |        |           |            |              |                 |                  |
|             | • Familiarity with SQL constructs basic         |         |        |           |            |              |                 |                  |
|             | statements.                                     |         |        |           |            |              |                 |                  |
|             | • Understand using SQL plus.                    |         |        |           |            |              |                 |                  |
|             | • Understand using advanced SQL operators.      |         |        |           |            |              |                 |                  |
|             | • Familiarity with SQL access methods &amp; SQL    |         |        |           |            |              |                 |                  |
|             | Tuning.                                         |         |        |           |            |              |                 |                  |
| 2PGDCA3     | Computerized                                    | 2       | 100    | 50        | 20         | 30           | 12              |                  |
|             | • Understand the basic concepts of accounting   |         |        |           |            |              |                 |                  |</p>
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<td>and inventory Tally configuration.</td>
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<td>• Understand working with accounts books, purchase and journal registers.</td>
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<td>• Ability to analyze: - stock group and item, stock category, ageing.</td>
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<td>• Understand cheque printing, printing options</td>
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<td>Programming with Visual Basic .Net</td>
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<td>• Understand the features &amp; architecture of .NET framework and use the various Windows application development tools.</td>
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<td>• Familiarity with visual studio, project basics &amp; IDE of VB. NET.</td>
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<td>• Ability to work with VB.NET language</td>
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<td>• Understand database programming with ADO.NET</td>
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<td>Introduction to Entrepreneurship</td>
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<td>• Understanding of entrepreneurship development concepts</td>
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<td>• On the job skill by working with a software / web development establishment office/ company.</td>
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<td>• Basic experience and knowledge of application software</td>
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**Note:** For a PASS - A Student would require to secure 40% for both Theory and Practical.

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DETAILED SYLLABUS

1PGDCA1-FUNDAMENTALS OF COMPUTERS & INFORMATION TECHNOLOGY


**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


**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


**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


**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 NortonAnti-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


**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**


**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.


**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**, Introduction, 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 autosizes.

**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.


**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.


**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 Autosizes, 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,

1PGDCA 3- PROGRAMMING METHODOLOGY & PROGRAMMING IN FoxPro


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 using 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 Keyboard 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


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


1PGDCA5- COMMUNICATION SKILLS & PERSONALITY DEVELOPMENT

English Language - Listening, Speech, Pronunciation, Reading, Spelling, Writing Right

Nouns: Countable and Uncountable, Pronouns: Personal, Relative and Others, Articles

The Parts of Speech, The Prepositions, Clauses: Coordinate, Subordinate, Relative Adverbs, Adjectives and Adjective Phrases, Verb

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The Model Auxiliaries, Adverb, Adverb Phrases Comparisons and Intensification, Linking Devices, Subject Verb Agreement, Tenses, Common Errors, Word Building, Vocabulary
Developing Ability of Question and Answer, Body Language and Its Use in Speaking, Group Discussions, Interview Skills
Composition - Making a Technical Report, E-Mails and Text Messages Composing, Letter Writing, Paragraph Writing, E-mail Writing, Writing Resume, Writing a Cover Letter

**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

Introduction to Personality a) Basic of Personality b) Human growth and Behavior c) Theories in Personality d) Motivation
Communication skills and Personality Development a) Intra personal communication and Body Language b) Inter personal Communication and Relationships c) Leadership Skills d) Team Building and public speaking
Techniques in Personality development I a) Self confidence b) Mnemonics c) Goal setting d) Time Management and effective planning
Techniques in Personality Development II a) Stress Management b) Meditation and concentration techniques c) Self hypnotism d) Self acceptance and self growth

**1PGDCA6- 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.
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, datatypes

Creating and Compiling C++ Programs - TURBO C++ IDE, Creating, compiling and running a C++ program using 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 array, Single-dimensional arrays, Two-dimensional arrays, Multi-dimensional arrays, User Defined Functions, Element 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, Retaining objects, Object assignment

Arrays, 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 Constructor, 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 IF / Operators

Inheritance - Introduction to Inheritance, Features or Advantages of Inheritance, Type of Inheritance, Base Class 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

2PGDCA2-RDBMS & SQL

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

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**2PGDCA3. COMPUTERIZED ACCOUNTING WITH TALLY**


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 Are, 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


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 Complianies

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 Fixt Rate, Voucher Interest At Variable Rate, Statement Of Interest Due On Invoice, Interest Reports, Interest Voucher Class

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?


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


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


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

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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 - 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


Classification and types of Entrepreneurship – Business Entrepreneurs, Types of Entrepreneurship, Entrepreneurship and Motivation, Growth and Entrepreneurship


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.


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
2PGDCA6 - PROJECT

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.

COUNSELING AND STUDY STRUCTURE

<table>
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<th>Title of the Course</th>
<th>Credit</th>
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<th>Counseling and Study Structure (hours)</th>
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## Study Modules & Books Information

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<th>Sr. No</th>
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PROGRAM-GUIDE

DIPLOMA IN ENTREPRENEURSHIP DEVELOPMENT (DED)

• Scheme of Examination
• Detailed Syllabus
• Counseling and Study Structure
• Study Modules & Books Information
Diploma in Entrepreneurship Development (DED)

(A) Duration : 12 Months
(B) Eligibility : 12th Pass
(C) Contents and Scheme of Examination

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<td>Creating &amp; Starting the (Venture) Enterprise</td>
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<td>• Understand creativity and business idea, knowledge of legal issues, business plan, marketing plan and organizational plan</td>
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| Semester II | Communication and Personality Development                    | 1       | 100 70 28     | - - 30      | 12             | • Basic communication skills  
• Personality grooming                                                                                                                                                                                                 |
| DED7       | Managing Growing and Ending the New (Venture) Enterprise     | 2       | 100 70 28     | - - 30      | 12             | • Familiarity with management of new venture and new venture expansion strategies and issues  
• Understand ending the venture, reorganization and related issues                                                                                                                                                |
| DED8       | Micro (Small) Enterprise Development                         | 2       | 100 70 28     | - - 30      | 12             | • Familiarity with small enterprises and financing of enterprise  
• Understand taxation benefits and growth strategies in small business                                                                                                                                             |
| DED9       | Management of Enterprise                                    | 2       | 100 70 28     | - - 30      | 12             | • Familiarity with fundamentals of business, working capital management, production and operations management and marketing management                                                                 |
| DED10      | Communicative English                                      | 1       | 100 70 28     | - - 30      | 12             | • Familiarity with basic principles of communications, business letters, enquiries and replies, correspondence and report writing                                                                 |
| DED11      | Introduction to Entrepreneurship                            | 2       | 100 70 28     | - - 30      | 12             | • Understanding of entrepreneurship development concepts                                                                                                                                                    |
| DED12      | Project / on the Job Training                               | 7       | - - - 100 40  | - - -       |                | • On the job skill by working with an entrepreneurial development / establishment organization                                                                                                                      |

**Note:** For a PASS - A Student would require to secure 40% for both Theory and Practical.

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Detailed Syllabus

DED 1: ENTERPRISE THEORY

The Nature and Importance; Earliest Period Definition of Entrepreneur; The Entrepreneurial Decision Process Change from Present Lifestyle; Desirability of New Venture Formation; Possibility of New Venture Formation; Role of Entrepreneurship in Economic Development; Government as an Innovator Entrepreneurship; Entrepreneurship; Entrepreneurial Careers and Education; Ethics and Social Responsibility of Entrepreneurs; The Future of Entrepreneurship.

The Entrepreneurial Mind: Identify and Evaluate the Opportunity, Develop Business Plan, Manage the Enterprise Strategic Orientation, Commitment to Opportunity, Commitment of Resources, Control of Resources, Course for Interest in Entrepreneurship, Climate for Entrepreneurship, Establishing Entrepreneurship in the Organization.


DED 2: BUSINESS ECONOMICS


Production: Production and Factors of Production, Division of Labour, Efficiency of Labour, Theories of Population, Forms of Business Organization, The Scale of production, Production Function, laws of Production and Isoquants.


Theory of Distribution: Micro and Macro Theories of Distribution, Rent, Wages, Interest, Profits.


DED 3: COMPUTER APPLICATION AND MANAGEMENT INFORMATION SYSTEM

Introduction to Computer, Input Output Devices, Storage Devices, Computer Software, Computer Virus, Data Communication and Network, Operating System (DOS, Windows), MS-Office (Word, Excel) and Internet & Application

Managing Hardware Assets, Managing Software Assets, Managing Data Resources; The Internet & The New Information Technology Infrastructure.

Redesigning the Organization with Information Systems; Understanding the Business Value of Systems and Managing Change; Managing Knowledge : Knowledge Work and Artificial Intelligence.


DED 4: 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.


DED 5: ORGANISATIONAL BEHAVIOUR & DEVELOPMENT


DED 6: Creating and Starting the (Venture) Enterprise


The Organizational Plan: Developing the Management Team, Legal Forms of Business, Ownership Costs of Starting a Business, Continuity of Business Capital Requirements, Management Control, Distribution of Profits and Losses, Building the Successful Organization, Job Description, Job Specifications, The Role of Board of Directors, The Role of Board of Advisors.

DED 7: 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,

**DED 8: MANAGING GROWING AND ENDING THE NEW (VENTURE) ENTERPRISE**

Preparing the New Venture Launch, Early Management Decisions, Sales (Incoming Revenue), Expenses/Cost (Outgoing Revenue), Recruiting and Hiring New Employees, Motivation and Leading the Team, Financial Control, Managing Costs and Profits, Taxes, Activity Ratios Leverage Ratios, Profitability Ratios, Marketing and Sales Control.


New Venture Expansion Strategies and Issues, Joint Ventures, Historical Perspective, Types of Joint Ventures, Factors in Joint Venture Success, Acquisitions, Advantages of an Acquisition, Disadvantages of an Acquisition, Specific Valuation Method, Structuring the Deal.


Ending the Venture, Reorganization, Extended Time Payment Plan, Keeping the Venture Going Starting Over, Reality of Failure Business Turnarounds, Succession of Business Management Buyout.

**DED 9: MICRO (SMALL) ENTERPRISE DEVELOPMENT**


**Growth Strategies in Small Business** : Objectives of Growth, Stages of Growth, Types of Growth, Strategies, Expansion, Joint Venture, Merger, Sub-Contracting, Concept of Industrial Sickness, Signals and Symptoms of Sickness, Magnitude of Industrial Sickness, Causes and Consequences of Industrial Sickness.


**DED 10: MANAGEMENT OF ENTERPRISE**


Recommendations Regarding Working Capital; **Inventory Management**: Concept of Inventory, Benefits and Motives for Holding Inventories, Objectives and Models of Inventory Management.

**Production and Operation Management**: Investment Analysis, Plant Location and Layout, Product and Production design, Quality Control, Small Business Technology; **Total Quality Management (TQM) for Small Enterprises**: Meaning of Quality, Meaning of TRQ, Need for TQM in Small Enterprises, TQM Process in Small Business.


**DED 11: COMMUNICATIVE ENGLISH**

Communication: Introduction to Communication; Objective of Communication; Media of Communication; Types of Communication; Barriers to Communication; Principles of Communication; Aids to Correct Writing Punctuation and the Use of capital letters; Foreign Words and Phrases; Spelling; Enriching Vocabulary.

Letters: Need, Functions and Kinds of Business Letters; Essentials of an Effective Business letter; The Lay-out; Planning the Letter.

Enquiries and Replies; Orders and Their Execution; Credit and Status of Enquiries; Complaints and Adjustments; Collection Letters; Circular Letters; Sales Letters; Bank Correspondence; Insurance Correspondence; Import-Export Correspondence; Agency Correspondence.

Correspondence of a Company Secretary; Office Memorandums; Office Orders; Office Circulars; Office Notes: Tools of Internal Correspondence; Form of Messages; Correspondence; with Public Authorities and other Agencies; Telegrams and Cables; Application Letters; Interview Letters; Reference; Testimonials; Letters of Appointment, Confirmation, Promotion, Retrenchment and Resignation; Public Relations Letters; Representations and Requests

Report Writing; Agenda and Minutes of Meetings; Copy Writing for Advertisement; Direct Mail Advertising; Classified Advertisements; Press Releases; Manuscripts for Publication and Elements Reading; Proof Reading; Proof Reading Symbols; Précis Writing.

**DED 12: 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


Classification and types of Entrepreneurship – Business Entrepreneurs, Types of Entrepreneurship, Entrepreneurship and Motivation, Growth and Entrepreneurship


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.


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

DED 13: Project / On the Job Training

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

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
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**Semester I**

| 1 | DED 1 | Enterprise Theory | Entrepreneurship Management by Bholanath Dutta |
| 2 | DED 2 | Business Economics | Business Economics by D.N. Dwivedi |
| 3 | DED 3 | Computer Application and Management Information System | S01 - Fundamentals of Computer & Information System, S50 - Management Information System |
| 5 | DED 5 | Organisational Behaviour and Development | Organizational Behaviour by R. K. Suri & Sanjeev Verma |
| 6 | DED 6 | Creating and Starting the (Venture) Enterprise | Entrepreneurship and New Venture Creation by Sahay and Sharma |

**Semester II**

| 7 | DED 7 | Communication and Personality Development | S68: Effective Communication & Personality Development |
| 6 | DED 8 | Managing Growing and Ending the New Enterprise (Venture) | S60-Managing Growing and Ending the New Enterprise (Venture) |
| 7 | DED 9 | Micro (Small) Enterprise Development | S62-Micro Development |
| 8 | DED 10 | Management of Enterprise | S64-Management of Enterprise |
| 9 | DED 11 | Communicative English | S61-Communicative English |
| DED 12 | Introduction to Entrepreneurship | S56 - Introduction to Entrepreneurship |
| 10 | DED 13 | Project / On the Job Training | |
PROGRAM-GUIDE

POST GRADUATE DIPLOMA IN AGRI-BUSINESS MANAGEMENT (PGDABM)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Post Graduate Diploma in Agri-Business Management (PGDABM)

(А) Duration : 12 Months

(Б) Eligibility : Graduate in any Discipline

(В) Contents and Scheme of Examination

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<td>28</td>
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<td>• Understand significance of management and organizational behavior, basic principles of personality, inter-personal relations and organizational culture</td>
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<td>PGDABM2</td>
<td>Environment and Agri – Business Management पर्यावरण एवं एग्री-बिजनेस प्रबंधन</td>
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<td>30</td>
<td>• Familiarity with role of agriculture in Indian economy, agri business sector, emerging trends in production &amp; exports and agri business policies</td>
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<td>PGDABM3</td>
<td>Safety Practices in the Work Environment कार्यस्थल पर सुरक्षा प्रबंधन</td>
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<td>• Familiarity with safety, fire safety, first aid, food safety, primary health and basic hygiene</td>
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<td>Marketing मार्केटिंग</td>
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<td>• Understand marketing and its application, marketing research, marketing mix, pricing and product management</td>
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(E) Credit : 32

(Г) पाठ्यक्रम विषय सूची एवं परीक्षा योजना
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<td>Agri–Business and Rural Marketing</td>
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<td>Understanding of finance and accounting principles, accounting standards, cost accounting and capital management</td>
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<td>Familiarity with concept of rural marketing, environmental factors, rural consumer's behaviour, rural marketing strategy and product promotion</td>
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<td>प्रोडक्शन एवं ऑपरेशन प्रबंधन</td>
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<td>Basic communication skills</td>
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<td>Understand concept and functions of production and operations &amp; material management, product mix</td>
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<td>Personality grooming</td>
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<td>Understand purchase procedures, work study &amp; measurement, inventory control and quality assurance</td>
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<td>PGDABM9</td>
<td>Entrepreneurship and Project Management</td>
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<td>Computer Application and Management Information System</td>
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<td>Familiarity with concept of entrepreneurship, techniques of network, financial appraisal/evaluation techniques and setting up industry &amp; entrepreneurship development programmes</td>
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<td>Basic knowledge of computer and management information system</td>
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<td>Familiarity with basic principles of communications, business letters, enquiries and replies, correspondence and report writing</td>
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<td>• On the job skill by working with an agri business establishment / organization</td>
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**Note:** For a PASS - A Student would require to secure 40% for both Theory and Practical.

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</table>
Detailed Syllabus

PGDABM 1: MANAGEMENT PRINCIPLES AND VALUES

Nature, Scope and Significance of Management, Evolution of Management Thought, Approaches to Management, Functions of a Manager, Planning, Organizing, Leading, Directing, Staffing etc.

Nature, Scope and Significance of Organizational Behavior; Evolution and Historical Background of Organizational Behavior; Contributions to different Disciplines, Micro Perspective of Organisational Behaviour

Personality, Self-concept, Self-esteem and Self-Efficacy; Nature and Dimensions of Attitudes, Job Related Attitudes; Perception, Motivation-Concept and Significance, Power and Politics

Interpersonal Relations-understanding, determinants, and developing; Leadership Styles and Influence Process; Leadership Theories; Types of Leaders, and Effective Leader; Group Dynamics-Group, Group Formation, Types of Groups, Group Role and Implications for Management

Organizational Culture or Climate-Concept, Dimensions, Ethos, Determinants; Organizational Conflicts-Concepts, Sources, Implications, and Management; Organizational Changes - Types, Resistances to Change

PGDABM 2: ENVIRONMENT AND AGRI-BUSINESS MANAGEMENT

Role of Agriculture in Indian Economy, Problems and Policy Changes relating to Farm Supplies, Farm Production, Agro Processing, Agricultural Marketing, Agricultural Finance etc. in the Country

Linkages among Sub-Sectors of the Agri Business Sector; Economic Reforms and Indian Agriculture; Impact of Liberalization, Privatization and Globalization on Agri Business Sector.

Emerging Trends in Production, Processing, Marketing and Exports; Policy Controls and Regulations relating to the Industrial Sector with Specific reference to Agro-Industries; Cooperatives in Agri Business Enterprises;


PGDABM 3: 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.

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PGDABM 4: MARKETING


PGDABM 5: FINANCIAL MANAGEMENT FOR AGRI-BUSINESS

Introduction to Finance and Accounting: Introduction, Importance of Management Accounting, Information Used by Management Accountants, Use of Management Accounting, How are Management Accounting Decisions Reviewed?, The Purpose of Accounting and General Accepted Accounting Practice.


**Introduction to Cost Accounting and Elements of Cost**: The Purpose and Nature of Cost Accounting, Elements of Cost, Cost Classification for General Cost Bookkeeping, Absorption and Marginal Costing and Cost/Volume/Profit Analysis.


**PGDABM 6: AGRI-BUSINESS AND RURAL MARKETING**


Environmental Factors - Socio-Cultural, Economic, Demographic, Technological and other Environmental Factors affecting Rural Marketing.

Rural Consumer’s Behaviour - Behavior of Rural Consumers and Farmers; Buyer Characteristics and Buying Behaviour; Rural v/s Urban Markets, Customer Relationship Management, Rural Market Research


Product Promotion - Media Planning, Planning of Distribution Channels, and Organizing Personal Selling in Rural Market in India.

**PGDABM 7: 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

**PGDABM 8: PRODUCTION AND OPERATIONS MANAGEMENT**


**PGDABM 9: ENTREPRENEURSHIP AND PROJECT MANAGEMENT**

Concept, characteristics of projects, types of projects, project identification, Projects life cycle.

Entrepreneurship, Significance of entrepreneurship in economic development qualities of entrepreneur, motivation, life cycles of new business, environmental factor effecting success of a new business, reasons for the failure and visible problems for business.

Project feasibility- market feasibility, technical feasibility, financial feasibility, and economic feasibility, social cost-benefit analysis, project risk analysis.

Network Methods: Meaning and Objectives, Network Analysis, Requirements for Network Analysis, Critical Path Method (CPM), Programme Evaluation and Review Technique (PERT), Similarities and Dissimilarities of PERT and CPM.

Financial appraisal/evaluation techniques- discounted/non-discounted cash flows; Net present values, profitability index, Internal rate of returns; Cost benefits ratio; Accounting rate of return, Pay back period, Project implementation; Cost over run, Project control and information system.

Procedural steps in setting up of an industry, entrepreneurship development programs and role of various institutions in developing entrepreneurship.

**PGDABM 10: COMPUTER APPLICATION AND MANAGEMENT INFORMATION SYSTEM**

Introduction to Computer, Input Output Devices, Storage Devices, Computer Software, Computer Virus, Data Communication and Network, Operating System (DOS, Windows), MS-Office (Word, Excel) and Internet & Application


Managing Hardware Assets, Managing Software Assets, Managing Data Resources; The Internet & The New Information Technology Infrastructure.

Redesigning the Organization with Information Systems; Understanding the Business Value of Systems and Managing Change; Managing Knowledge : Knowledge Work and Artificial Intelligence.


**PGDABM 11: COMMUNICATIVE ENGLISH**

Communication : Introduction to Communication; Objective of Communication; Media of Communication; Types of Communication; Barriers to Communication; Principles of Communication; Aids to Correct Writing Punctuation and the Use of capital letters; Foreign Words and Phrases; Spelling; Enriching Vocabulary.

Letters : Need, Functions and Kinds of Business Letters; Essentials of an Effective Business letter; The Lay-out; Planning the Letter.
Enquiries and Replies; Orders and Their Execution; Credit and Status of Enquiries; Complaints and Adjustments; Collection Letters; Circular Letters; Sales Letters; Bank Correspondence; Insurance Correspondence; Import-Export Correspondence; Agency Correspondence.

Correspondence of a Company Secretary; Office Memorandums; Office Orders; Office Circulars; Office Notes: Tools of Internal Correspondence; Form of Messages; Correspondence; with Public Authorities and other Agencies; Telegrams and Cables; Application Letters; Interview Letters; Reference; Testimonials; Letters of Appointment, Confirmation, Promotion, Retrenchment and Resignation; Public Relations Letters; Representations and Requests

Report Writing; Agenda and Minutes of Meetings; Copy Writing for Advertisement; Direct Mail Advertising; Classified Advertisements; Press Releases; Manuscripts for Publication and Elements Reading; Proof Reading; Proof Reading Symbols; Precis Writing.

PGDABM 12: 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


Classification and types of Entrepreneurship – Business Entrepreneurs, Types of Entrepreneurship, Entrepreneurship and Motivation, Growth and Entrepreneurship


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.


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 a 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

**PGDABM 13: PROJECT / ON THE JOB TRAINING**

All the candidates of PGDABM 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
## Counseling and Study Structure

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
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<th>Counseling and Study Structure (hours)</th>
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<td>Face to Face Counseling</td>
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<td>Environment and Agri-Business Management</td>
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### Study Modules & Books Information

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<td>Management Principles and Values</td>
<td>Values and Ethics in Management - by Tripathi &amp; Kaur</td>
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<td>Environment and Agri – Business Management</td>
<td>Economic Environment of Business by H.L. Ahuja</td>
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<td>New Perspective in Rural Agricultural Marketing by Y. Ramkishan</td>
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<td>S68: Effective communication &amp; personality development</td>
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<td>Fundamentals of Entrepreneurship by H. Nandan</td>
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<td>S01 - Fundamentals of Computers &amp; Information Technology</td>
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PROGRAM-GUIDE

CERTIFICATE IN COMPUTER APPLICATIONS (CCA)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Certificate in Computer Applications (CCA)
कम्प्यूटर एप्लीकेशन मेंसर्टिफिकेट(CCA)

(A) Duration : 6 Months
(B) Eligibility : 10th Pass
(C) Contents and Scheme of Examination

<table>
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<th>Title of the Course</th>
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<th>Theory</th>
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<td>Max</td>
<td>Min</td>
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<td>Fundamentals of Computers &amp; Information Technology</td>
<td>3</td>
<td>100</td>
<td>70</td>
<td>28</td>
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<td>CCA2</td>
<td>Operating System (DOS, Windows) ओपरेटिंग सिस्टम (डोस, विंडोज)</td>
<td>3</td>
<td>100</td>
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<td>Safety Practices in the Work Environment कार्यपरिसर में सुरक्षा प्रचार</td>
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<td>50</td>
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<td>8</td>
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<tr>
<td>CCA4</td>
<td>MS-Office (Word, Excel, Powerpoint) एम.एस. ऑफिस (वर्ड, एक्सेल, पावरपॉइंट)</td>
<td>3</td>
<td>100</td>
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Key Learning Outcomes:
- Understand functions, components of a computer system, storage devices & their physical structure & working.
- Understand operating system & file system.
- Understand & use computer networks.
- Understand booting process of OS & file system installation.
- Understand Windows: accessories & system tools.
- Understand advanced features of Windows & setup Network connection.
- Familiarity with safety, first aid, food safety, primary health and basic hygiene.
- Familiarity with creation, & printing a document/presentation/ & excel sheet in MS Office.
- Ability to use advanced features in MS Word like inserting word art, shapes, clipart, charts, smart arts, symbols, graphs etc. in a document/slide.
- Familiarity with using various formulas, function in Excel.
- Familiarity with importing & exporting excel sheets to/from various formats.
| CCA5 | Programming Concepts & Techniques and Programming in Foxpro | 2 | 100 | 50 | 20 | 20 | 8 | 30 | 12 | • Understand programming concept coding, debugging & testing of program.  
• Understand designing FoxPro reports /label & printing them  
• Ability to identify common error messages & apply debugging techniques & commands |
| CCA6 | Introduction to Financial Accounting with Tally | 3 | 100 | 50 | 20 | 20 | 8 | 30 | 12 | • Understand the basic concepts of accounting and inventory Tally configuration.  
• Understand working with accounts books, purchase and journal registers.  
• Ability to analyze: - stock group and item, stock category, ageing.  
• Understand cheque printing, printing options & formats, multi-account printing and dynamic report specific options. |
| CCA7 | Communication and Personality Development | 1 | 100 | 70 | 28 | - | - | 30 | 12 | • Basic communication skills  
• Personality grooming |

**Note:** For a PASS - A Student would require to secure 40% for both Theory and Practical.

<table>
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<tr>
<th>Grand Total</th>
<th>Pass</th>
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<tbody>
<tr>
<td>700</td>
<td>280</td>
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</table>
Detailed Syllabus

CCA1 - 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.


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 services and e-governance. Various e-governance initiatives in India.

CCA2 - 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


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

Using Media Player, Sound Recorder, Volume Control. 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 password etc. Accessibility Features of Windows. Sharing Information between Programs, sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers - Understanding OLE - Embed/Link Using Cut and Paste and Embed/Link Using Insert Object - Manage Embedded/Linked Object.

CCA3: 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.

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**CCA4 – 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 SmartArts, 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 SmartArts, 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.

CCA5 - 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

VIEWWINING 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 & Subgrouping.

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 Messages, Debugging techniques and commands

MULTIPLE DATA FILES

Concept of Multiple Database Files - Using multiple database files, Relating 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.

CCA6 - INTRODUCTION TO FINANCIAL ACCOUNTING WITH TALLY

Basic Concepts of Accounting, Financial Statements, Financial Statement Analysis, Cost Centre, Basic concepts of Inventory Tally Configuration & INI setup, Data Directory & Folders configuration, Single & Multiple User, Tally Screen Components, Mouse / Keyboard Conventions & Key, Combinations, Switching between screen areas, Quitting Tally. Maintaining Company Data, Basic Company Details, Create/ Alter/ Select/ Load/ Close a Company, Chart of Accounts, Company Features, Configuration.

Create, Alter & Display Groups and Ledgers, All accounting voucher types and transactions, Create and Alter new Voucher type, Item and Account Invoice transactions, Excise Invoice, Export Invoice, Transactions using Bill-wise details Create, Alter & Display Cost Centre and Cost Categories, Cost centre& Cost Category allocation in voucher entry, Creating Cost centre Class, Invoice entry in a Class situation, Create, Alter & Delete Foreign Currencies, Voucher entry using foreign currency, Bank Reconciliation, Interest calculations using simple & advance parameters, Interest calculations on outstanding balances & on invoices, Use of voucher class, adjustment of interest, Creation of voucher class, Invoice entry in a class situation.


Create, Alter & Display Stock Groups and Stock Items, Stock item behaviour using costing and market valuation method, other behaviour like treating all sales as new manufacture, treating all purchases as consumed, treating all rejections inward as scrap, ignoring negative balances, Treating difference due to physical counting, Create, Alter & Display Stock categories, Create, Alter, Display simple & compound units of measures, Stock items using alternate units, Defining standard cost & selling price, Defining Rate of duty, Defining MRP, Create, Alter & Display Godowns, Allocation of items to the Godowns, All inventory voucher types and transactions, Inventory details in accounting vouchers, Defining re-order level, Transactions using tracking numbers, Use of batch-wise details in voucher, Additional cost details in vouchers, Creating Bill of material, Cost estimation, Creating Price list & defining Price levels, invoice using Price list, Zero valued entries, Transactions in case of
Different actual & billed quantities. Reports like Stock summary, Inventory books like Stock item, Group summary, Stock transfers, Physical stock register, Movement analysis, Stock group & item analysis, stock category analysis, Ageing analysis, Sales order & Purchase order book, Statement of inventory related to Godowns, categories, stock query, Reorder status, Purchase & Sales order summary, Purchase & Sales bill pending, Exception reports like negative stock & ledger, overdue receivables & payables, memorandum vouchers, optional vouchers, post-dated vouchers, reversing journals.

Cheque Printing, Common printing options, Different printing formats, Multi-Account printing, Dynamic- Report specific options. Creating Group company, Use of Tally vault, Using Security control & defining different security levels, Use of Tally Audit. Back-up & Restore, Splitting company data, Export & import of Data, ODBC compliance, use of E-mail, Internet publishing, Upload, web browser & online help, Re-write data.

CCA7 - 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,

## Counseling and Study Structure

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Hours of Study</th>
<th>Counseling and Study Structure (hours)</th>
<th>Study Modules &amp; Books Information</th>
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<td>Face to Face Counseling</td>
<td>Self study</td>
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<td>Fundamental of Computers &amp; Information Technology</td>
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PROGRAM-GUIDE

CERTIFICATE IN WEB TECHNOLOGY (CWT)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Certificate in Web Technology (CWT)

वेब टेक्नॉलॉजी में सर्टिफिकेट (CWT)

(A) **Duration**: 6 Months  
(B) **Eligibility**: 12th Pass

(C) **Contents and Scheme of Examination**

<table>
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<th>Credit</th>
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<th>Theory</th>
<th>Practical Marks</th>
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<th>Key Learning Outcomes</th>
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<td>CWT1</td>
<td>Fundamentals of Networks and Internet</td>
<td>4</td>
<td>100</td>
<td>70</td>
<td>28</td>
<td>30</td>
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<td></td>
<td>• Understand computer network concept (topologies, layers)</td>
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<td></td>
<td>• Describe various media &amp; equipment used in networking.</td>
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<td></td>
<td>• Understand basics of web browsers, concepts of search engines and web protocols.</td>
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<td></td>
<td>• Obtain an email address using web based and POP 3 email services.</td>
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<td></td>
<td>• Install &amp; configure email client software.</td>
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<tr>
<td>CWT2</td>
<td>Web Page Designing</td>
<td>4</td>
<td>100</td>
<td>50</td>
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<td></td>
<td>• Familiarity with web pages</td>
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<td></td>
<td>• Ability to comprehend HTML, concepts, versions, elements, tags etc.</td>
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<td>• Ability to create effective</td>
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<td></td>
<td>• Understand web hosting</td>
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<td></td>
<td>• Ability to upload web sites using FTP software.</td>
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<td></td>
<td>• Familiarity with safety, fire safety, first aid, food safety, primary health and basic hygiene</td>
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<td>4</td>
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<td></td>
<td>• Understand installing and configuring IIS 5.0</td>
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<td>• Understand Microsoft management console. (MMC)</td>
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<td></td>
<td>• Understand client side scripting and sever side scripting</td>
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<td></td>
<td>• Understand basic ASP Techniques &amp; Java Script</td>
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<td>• Understand basics of web programming.</td>
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<td></td>
<td>• Ability to deploy web application &amp; understand developing .NET 3.5 based web application.</td>
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<td>CWT6</td>
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<tr>
<td></td>
<td>• Basic communication skills</td>
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<td></td>
<td>• Personality grooming</td>
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Note: For a PASS - A Student would require to secure 40% for both Theory and Practical.

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<tbody>
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<td>Grand Total</td>
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600
Detailed Syllabus

CWT1 - FUNDAMENTALS OF NETWORKS AND INTERNET


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, URLs 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, silverlight, 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, 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.


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, Tomcat etc. Hosting directories, Concepts of Virtual Directories, 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.)
CWT2 - WEB PAGE DESIGNING

Web Page introduction, Concepts of Hypertext, Introduction to various Browsers in the Market - Internet Explorer, Mozilla Firefox, Google Chrome, etc.


Cascading Style sheets – defining and using simple CSS.

Introduction to WYSIWYG Design tools for HTML, Overview of MS FrontPage, Macromedia Dream weaver, Expression Web and other popular HTML editors, designing web sites using MS FrontPage /Expression Web.

Use of Frames and Forms in web pages, Image editors, Issues in Web site creations & Maintenance,

Web Hosting and publishing Concepts, Hosting considerations, Choosing Web servers – Linux Vs Windows Web servers, Choosing Domain names, Domain name Registration, Obtaining space on Server for Web site,

FTP software for upload web site. Add your website on search engines.

Javascript Overview, Javascript and the WWW, Javascript vs. VBScript, Javascript vs. Java, Javascript versions, Script element,. 

JavaScript Functions: Functions introduction, Calling functions, Javascript Comments, Variables: Variables overview, declaring variables, Types of variables, Casting variables, Alert box , Prompt & confirm. 

Expressions: Arithmetic operators, Assignment operators, Logical operators, Expressions and precedence, Statements: If statement, For statement, While statement, Break/Continue

Creating arrays/event handlers, JavaScript Object model, Object and Events in JavaScript – OnClick, On MouseOver, On Focus, OnChange, OnLoad etc.Getting data with forms.

CWT3 - 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-preserving food-borne illness and improving quality, Transport and storage–safeguarding food, Food safety and retailing, Food safety in the home, Food borne diseases.

**CWT4-ASP AND JAVASCRIPT**

**Active Server Pages**


Basic ASP Techniques - Getting Information from the User, Using the Information obtained from the User, A Simple Example

Variables in ASP - Creating Variable, Data types in VBScript, Declaring Variable, Option Explicit, Arithmetic and Comparison Operator, Constants & String Manipulation, Arrays

ASP Control Structure - Branching Structure, If...Then, Select Case, Looping Structure, For...Next, For Each Next, Do While, Do Loop While, Jumping Statement, Procedures, Functions


Application, Session and Cookies - Using Cookies, Making and Deleting Cookies, The Application Objects, Application Variable, Application Object Collection, Application Object Methods, The Session Object, Session Object Collection, Session Object Properties, Session Object Methods

ASP and Data Access - Universal Data Access, ODBC, OLE-DB, ADO, Getting Data, Microsoft Access (.mdb) files, Microsoft SQL Server / MSDE (.mdf) files, What is Connection, Connection String, Data Link File, Data Source Names, Connection Object, Opening a Connection, Closing a Connection, Using Recordsets, The Recordset Object, Creating a Recordset using explicit Connection Object, ADO Constants, Active Connection, Using Recordset Object, BOF and EOF Properties, Moving through Records, Finding Record

Advancement in ASP – ASP.NET introduction, main differences between ASP and ASP.NET, How to move ASP to ASP.NET, A sample ASP.NET application.

**JavaScript**

Javascript Overview, Javascript and the WWW, Javascript vs. VBScript, Javascript vs. Java, Javascript versions, Script element.,

JavaScript Functions: Functions introduction, Calling functions, Javascript Comments, Variables: Variables overview, declaring variables, Types of variables, Casting variables, Alert box, Prompt & confirm.
Expressions: Arithmetic operators, Assignment operators, Logical operators, Expressions and precedence, Statements: If statement, For statement, While statement, Break/Continue

Creating arrays/event handlers, JavaScript Object model, Object and Events in JavaScript – OnClick, OnMouseOver, On Focus, OnChange, OnLoad etc. Getting data with forms.

**CWT5 - ADVANCED WEB TECHNOLOGIES**


Working with standard controls, navigation controls, validation controls, login controls and database controls, Personalizing websites using WebParts controls, Providing a consistent look and feel to websites through master pages and themes.

Creating database-driven applications using LINQ, Deploying web applications using various methods, Developing .NET 3.5 based Web applications using the Silverlight and WPF technologies.

Introducing LastView and DataPager Controls, Working with web services and WCF Services, Creating applications using AJAX and AJAX Control toolkit.

**CWT6 - 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
## Counseling and Study Structure

<table>
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<th>Sr. No</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Hours of Study</th>
<th>Counseling and Study Structure (hours)</th>
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<td>Face to Face Counseling</td>
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<tr>
<td>1</td>
<td>CWT 1</td>
<td>Fundamental of Networks and Internet</td>
<td>4</td>
<td>120</td>
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<td>4</td>
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<td>Safety Practices in the Work Environment</td>
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<td>6</td>
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## Study Modules & Books Information

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<th>Subject Name</th>
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<td>ASP and Java Script</td>
<td>S59 -Active Server Pages (ASP)</td>
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<td>Advance Web Technologies</td>
<td>S58- Advance Web Technology</td>
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<td>6</td>
<td>CWT 6</td>
<td>Communication and Personality Development</td>
<td>S68: Effective Communication &amp; Personality Development</td>
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</table>
PROGRAM-GUIDE

CERTIFICATE IN MULTIMEDIA AND ANIMATION DESIGNING (CMAD)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Certificate in Multimedia and Animation Designing (CMAD)
मल्टीमीडिया एवं एनिमेशन डिजाइनिंग के साथ फ्रीकार्ड (CMAD)

- **Duration**: 6 Months
- **Courses**: 07
- **Eligibility**: 12th Pass
- **Credit**: 16

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<tr>
<th>Course Code</th>
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<th>Credit</th>
<th>Total Marks</th>
<th>Theory</th>
<th>Practical Marks</th>
<th>Assignments</th>
<th>Key Learning Outcomes</th>
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<tr>
<td>CMAD1</td>
<td>Fundamentals of Computers &amp; Information Technology</td>
<td>3</td>
<td>100</td>
<td>70</td>
<td>28</td>
<td>-</td>
<td>30 12 • Understand functions, components of a computer system, storage devices &amp; their physical structure &amp; working. • Understand operating system &amp; file system. • Understand &amp; use computer networks</td>
</tr>
<tr>
<td>CMAD2</td>
<td>Operating System (DOS, Windows, Linux)</td>
<td>3</td>
<td>100</td>
<td>50</td>
<td>20</td>
<td>20 8</td>
<td>30 12 • Understand booting process of OS &amp; file system, installation. • Understand Windows: accessories &amp; system tools. • Understand advanced features of Windows &amp; setup network connection. • Understand basic working of DOS &amp; Linux Operating System</td>
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<tr>
<td>CMAD3</td>
<td>Safety Practices in the Work Environment</td>
<td>1</td>
<td>100</td>
<td>50</td>
<td>20</td>
<td>20 8</td>
<td>30 12 • Familiarity with safety, first aid, food safety, primary health and basic hygiene</td>
</tr>
<tr>
<td>CMAD4</td>
<td>Photoshop and Corel Draw</td>
<td>3</td>
<td>100</td>
<td>50</td>
<td>20</td>
<td>20 8</td>
<td>30 12 • Familiarity with working of Photoshop &amp; Corel Draw. • Understand digital image basics. • Understand working with layers, masks &amp; selection tools in Photoshop. • Understand creating web enabled object &amp; text in Corel Draw</td>
</tr>
<tr>
<td>CMAD5</td>
<td>PageMaker पेजमेकर</td>
<td>3</td>
<td>100</td>
<td>50</td>
<td>20</td>
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<td>8</td>
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</table>
| CMAD6 | Multimedia Components & Tools मल्टीमीडिया कंप्यूटर टूल्स | 2 | 100 | 50 | 20 | 20 | 8 | 30 | 12 | • Understand object linking/embedding concepts and font design basics.  
• Understand image processing using Photoshop, Paint Shop, Corel Draw etc.  
• Familiarity with know-how to use sound recording and editing software.  
• Understand basics, principle and use of animation.  
• Ability to create simple web animation using GIF Animator and Flash.  
• Ability to comprehend & use authoring tools for CD based multimedia |
| CMAD7 | Communication and Personality Development कम्यूनिकेशन और परसनलिटी डेवलपमेंट | 1 | 100 | 70 | 28 | - | - | 30 | 12 | • Basic communication skills  
• Personality grooming |

**Note:** For a PASS - A Student would require to secure 40% for both Theory and Practical.

<table>
<thead>
<tr>
<th>Grand Total</th>
<th>Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>700</td>
<td>280</td>
</tr>
</tbody>
</table>
Detailed Syllabus

CMAD1 - 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.


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...
andControl, Purchasing, Banking, Credit and Collection, Warehousing. Use of computers in common public services and e-governance. Various e-governance initiatives in India.

**CMAD2 - OPERATING SYSTEMS**

Fundamentals 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, DSKCOMP, DOSKEY, TREE, MOVE, LABEL, APPEND, FORMAT, SORT, FDISK, BACKUP, EDIT, MODE, ATTRIB, HELP, SY S 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, Volume Control. 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 password etc. Accessibility Features of Windows. Sharing Information between Programs, sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers - Understanding OLE - Embed/Link Using Cut and Paste and Embed/Link Using Insert Object - Manage Embedded/Linked Object.

**LINUX** - Linux introduction, Basic Features, Advantages, Installing requirement, Basic Architecture of Unix/Linux system, Kernel, Shell, Linux File system - Boot block, super block, Inode table, data blocks, Linux standard directories. Partitioning the Hard drive for Linux, Installing the Linux system, System, startup and shutdown process, init and run levels.

Essential Linux commands Understanding shells, Commands for files and directories cd, ls, cp, md, rm, mkdir, rmdir, pwd, file, more, less, creating and viewing files using cat, file comparisons – cmp&comm, View files, disk related commands, checking disk free spaces.

Process fundamentals, connecting processes with pipes, tee, Redirecting input output, manual help, Background processing, managing multiple processes, changing process priority with nice, scheduling of processes at command, cron, batch commands, kill, ps, who, sleep, Printing commands, find, sort, touch, file, file
CMAD 3: 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, 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.


CMAD 4 - PHOTOSHOP & CORELDRAW

Photoshop
Adobe Photoshop: introduction, features, starting Photoshop, interface details, open an image, navigation and viewing modes, Rulers and guides, saving image, close Photoshop.

Digital Image basics - Introduction, file size, modes and channels, bit depth, Hue, Saturation and Brightness, colors and light, file formats, resolution, calculate file size, re-sampling, RGB and CMYK model, printer setting, preview images, convert to grayscale, printing document.

Layers: introduction, layer types, channels, adjustment layers, layer mask, working with layers and masks, layer blends, sample blend, advanced bending techniques

using selection tools, modify your selection, saving and loading selections, feather and anti alias, defringe and matting, Using Magic wand, quick mask, color range, channel masking, extract filter

controlling tones, retouching images, using special effects - Layer comps, Gradient maps, cast shadow, posterization, cross process effect, digital diffusion

Image slicing for Web. Save file as PDF.

**CorelDraw**

Introduction to CorelDraw – Understanding vector drawing, various features of CorelDraw, Understanding Interface – Menu bar, Property bar, Toolbox, Drawing window, Drawing page, Docker window/palette, Color palette, Status bar, Document navigator, Navigator, CorelDRAW terminology and concepts, CorelDRAW workspace tools

Creating a New document, Open a previous built document, use prebuilt templates, draw some object, write some text using text tool, import graphics and text in document, arrange objects, filled in color, resizing objects, undo, redo and repeat action, save file, backup a file, export a file, zoom view, close file.

Drawing objects – making square, rectangle, circles, triangles and other basic shapes, fill color, fill patterns, grouping objects, select, move copy and resizing objects, cloning objects, making lines & curves, Bezier curve, eraser use, Polly tool, brush mode, calligraphic mode, preset mode, spray mode, artistic media tools, text and object creation & removal, making spiral and arrow shapes, flowchart shapes,, star shapes etc, create callout, making graph paper.

Page and document setup – page size, layout, background setup, insert a page, delete a page, using rulers, grids and guidelines.

Filling and patterns- Filling objects with colors and pattern, using solid, bitmap, wignet, postscript colors and patterns, interactive and mash fills.

Using Text – Insert Text, Using Fonts and Sizes, Editing Text, Aligning and spacing text, Setting colors, Text fitting on Path, Changing case of text, text skew and rotation, transform text, rotate text, find and replace text, Wrapping paragraph text around objects and text, Working with symbols.

Special Effects – Envelop tool, blending, PowerClip, shadow, transparencies, distortion tools, smudge tool, cantor tool, lens effect, convert bitmap to vector, bitmap filter, creation a Wignet.


Printing in CorelDraw – Print document from coreldraw, PS file, EPS file, PDF file, Print Preview, Color separation.

**CMAD5 – PAGEMAKER**


Drawing Text Box, Writing Text, Insert Pages, 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, using 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.

**CMAD6 - MULTIMEDIA COMPONENTS & TOOLS**


Text – Concepts of plain & formatted text, RTF & HTML texts, using common text preparation tools, Conversion to and from of various text formats, using standard software, Object Linking and Embedding concept, Basics of font design, overview of some fonts editing and designing tools, Understanding & using various text effects.

Images – importance of graphics in multimedia, Vector and Raster graphics, image capturing methods – scanner, digital camera etc. various attributes of Images – size, color, depth etc. Various Image file format – BMP, DIB, EPS, CIF, PEX, PIC, JPG, TGA, PNG and TIF format – their features and limitations, graphic file formats conversions, processing images with common software tools such as Photoshop, Paint Shop pro, Corel draw etc.

Sound: Sound and its Attributes, Mono V/s Stereo sound, Sound channels, Sound and its effect in multimedia, Analog V/s Digital sound, Basics of digital sounds-Sampling, Frequency, Sound Depth, Channels, Sound on PC, Sound standards on PC, Capturing and Editing sound on PC, Overview and using some sound recording, editing software. Overview of various sound file formats on PC – WAV, MP3, MP4, OggVorbise etc.


Animation on the Web – features and limitations, creating simple animations for the Web using GIF Animator and Flash.


Brief Introduction to video editing and movie making tools – Quick time, video for windows & Adobe premier.

Authoring tools for CD Based Multimedia: Type of multimedia authoring tools, key factors of selecting CD based multimedia authoring tools, Planning and distribution of a multimedia project. Multimedia development team & skills requirement, Stages in designing & producing multimedia products for CD, Testing of product, distribution of multimedia product, various formats of CD’s and DVD’s.


**CMAD7- COMMUNICATION AND PERSONALITY DEVELOPMENT**

**Grammar:**
Parts of Speech, - Articles and Determines, Noun and Pronoun, Adjective and Adverb, Verbs, Conjunctions and Prepositions, Tenses, Punctuations, Active & Passive Voice, Type of Sentences (simple, complex, compound), Reported Speech (direct and indirect), Types of Sentences, Prepositions, -Gerund, -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
## Counseling and Study Structure

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Hours of Study</th>
<th>Counseling and Study Structure (hours)</th>
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<td>PageMaker</td>
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<td>CMAD 6</td>
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<td>Communication and Personality Development</td>
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## Study Modules & Books Information

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<th>Sr. No</th>
<th>Course Code</th>
<th>Subject Name</th>
<th>Modules to be used</th>
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<td>Fundamentals of Computers &amp; Information Technology</td>
<td>S01 Fundamentals of Computers &amp; Information Technology</td>
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<td>Operating System (DOS, Windows, Linux)</td>
<td>S02 - Disk Operating System, S18 - MS- Windows, S26 - Linux</td>
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<td>PageMaker</td>
<td>S09 - DTP PageMaker</td>
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<td>Multimedia Components &amp; Tools</td>
<td>Multimedia at Run by Rajeshwar Shukla</td>
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<td>7</td>
<td>CMAD 7</td>
<td>Communication and Personality Development</td>
<td>S68: Effective Communication &amp; Personality Development</td>
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</table>
PROGRAM-GUIDE

CERTIFICATE IN JAVA PROGRAMMING (CJP)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Certificate in JAVA Programming (CJP)

(А) Duration : 6 Months  (D) Courses : 07
(В) Eligibility : 12th Pass  (Е) Credit : 16

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<th>Course Code</th>
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<th>Total Marks</th>
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<th>Assignments</th>
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<td>Min</td>
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<td>CJP1</td>
<td>Fundamentals of Computers &amp; Information Technology सूचना तकनीक एवं कंप्यूटर से परिणाम</td>
<td>3</td>
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<td>70</td>
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<td>Operating System (Windows) ओपरेटिंग सिस्टम (विंडोज)</td>
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<td>CJP3</td>
<td>Safety Practices in the Work Environment कार्य परिवेश में सुरक्षा प्रचार</td>
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<td>CJP4</td>
<td>Programming Concepts प्रोग्रामिंग की अंकारणांक</td>
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<td>20 8</td>
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<tr>
<td>CJP5</td>
<td>Basic Java programming</td>
<td>Ability to analyze and use feedback to improve your designs</td>
<td>Able to know and understand how to use information technology effectively to input and/or extract data accurately</td>
<td>Should be able to record any defects and corrective actions taken to inform future work</td>
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<td>CJP6</td>
<td>Advance Java programming</td>
<td>Understand the process for converting technical specifications into code</td>
<td>Knowledge of current practice in the infrastructure design of software code</td>
<td>Understanding of how to write software code that is efficient, readable and maintainable</td>
<td>Awareness about the range of code generation tools and unit testing tools used to develop software code</td>
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<tr>
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<td>3</td>
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<tr>
<td>CJP7</td>
<td>Communication and Personality Development</td>
<td>Knowledge about use of coding tools</td>
<td>Competency in the use of the Java programming language in the development of small to medium-sized application programs that demonstrate professionally acceptable coding and performance standard and Understand the basic principles of the object-oriented programming</td>
<td>Solve problems using the Java programming language</td>
<td>Design programming solutions</td>
<td>Construct well structured Java solutions using software development life cycle techniques</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>100</td>
<td>70</td>
<td>28</td>
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</tr>
</tbody>
</table>

**Note:** For a PASS - A Student would require to secure 40% for both Theory and Practical.

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<thead>
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Detailed Syllabus

CJP1 - 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.


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.
CJP2 - OPERATING SYSTEMS

Fundamentals 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.


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

Using Media Player, Sound Recorder, and Volume Control. 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.

CJP3 - 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.

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.

**CJP4 - PROGRAMMING CONCEPTS**

*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.


**CJP5 - BASIC JAVA PROGRAMMING**

*Getting Started*

What is Java, What is JVM, What is JDK and NetBeans, Getting Started with Java, Rules for Constructing Constants, Rules for Constructing Variable Names, Java Keywords, The First Java Program, Compilation and Executin, Receiving Input, Command-line Arguments, More About Data Types, Integer Types, Real Types, char Data Type, boolean Data Type, Java Instructions, Type Declaration Instruction, Arithmetic Instruction, Type Conversion In Arithmetic Instruction, Explicit Conversion, Hierarchy of Operations, Associativity of Operators, Constant Variables, Console Input / Output In Java, readLine () Function, println () And format () Functions, Escape Sequences, Control Instructions in Java,

*Decision Control Instruction*


*Loop Control Instruction*


*Case Control Instruction*

Decisions Using switch, The Tips and Traps, Switch Versus if-else Ladder,

*Function*

What is a Functions, Why Use Functions, Passing Values between Functions, Scope Rule of Functions, Function Overloading, Recursion, Recursion and Stack

*Introduction To OOP*

Structured Programming, Object-Oriented Programming, Characteristics of OOP, Objects, Classes, Inheritance, Polymorphism, Containership, Reusability, Object-Oriented Design,

*Classes and Objects*

Classes and Constructors, Object Destruction, Terminology, A Complex Class, The this reference, Static Constructors
Arrays
What are Arrays, A Simple Program Using Array, More on Array, Array Initialization, Array Access, Bounds Checking, Passing Array Elements To A Function, Passing Array Reference To A Function, Returning An Array, Common Array Operations, The Eight Queens Problem, Array of Objects, Two Dimensional Arrays, Passing And Returning 2-D Array, Three-Dimensional Array, Jagged Array, Passing Jagged Arrays, 3-D Jagged Arrays, Resizing of Arrays

Strings
What are Strings, More about Strings, Splitting Strings, StringBuilder Class, Array of Strings, Sorting Strings, The Calendar Program, Enumerations, Use of Enumerated Data Type.

Inheritance
Uses of Inheritance, More Inheritance, Constructors in Inheritance, Shadowing Functions and Data, The final Keyword, Incremental Development.

Polymorphism
Polymorphism, Abstract Classes and Functions, Abstract Functions, Interfaces, Practical Uses of Interfaces, Interfaces – Focused View, Interfaces – Different Implementations, Interfaces-Unrelated Inheritance.

Exception Handling
Exception Handling In Java, Catching Multiple Exceptions, The finally Block, User-defined Exceptions

Effective Input/output
Expectation From An I/O System, File, Directory and Drive Operations, The Java Streams Solution, Stream Classes, Byte and Character Operations, Reading Strings From A File, Record IO, User-defined Streams,

File Encryption/Decryption

Operations On Bits
Bitwise Operators, One’s Complement Operator, Right Shift Operator, Left Shift Operator, Bitwise and Operator, Bitwise or Operator, Bitwise XoR Operator, The showBits () Function, Hexadecimal Numbering System. Relationship between Binary and Hex

CJP6 – ADVANCE JAVA PROGRAMMING

The Basics of Java
A brief history of Java, The java Architecture, Java Features, Importance of Java to the Internet, Java Applets and Applications

Fundamentals of Object Oriented Programming
Concepts of OOP, Benefits of OOP, Java and C++

Java Environment
Java Development Kit, Application programming Interface (API), Getting started with JDK, Java program structure, Using Java with Other Tools

Java tokens
Java character set, Keywords, Identifiers, Literals, Separators,

Constants, Variables and Data types
Data Types, Type Casting, Constants, Variables and their Scope
Operators and Expressions
Arithmetic Operators, Relational & Conditional Operators, Logical Operators, Assignment Operators
Increment & Decrement, Bitwise Operators, Special Operators, Precedence of Operators

Control Flow statements
If & If else statements, Switch Statement, For loop, While do loop, Branching

Introduction to Classes
Defining a class, Creating objects, Methods

Constructors and Access Specifiers
Application of Constructor, Parameterized Constructors, Overloading Methods and Constructors,
Access control Modifiers : Public, Private, and Protected, Static, Final and Abstract Modifiers

Inheritance and Method Overriding
Inheritance basics, Method overriding

Arrays
One-dimensional array, Multidimensional array

Strings
Strings class, Working with strings, stringBuffer class

Vector and wrapper class
Vector Constructors, Working with vector methods, Wrapper Class

Using Java Interfaces
Defining an Interface, Implementing an Interface, Extending an Interface

Using Java Packages
Defining a Package, Brief discussion on CLASSPATH, Access Protection, Importing a package, Java API

Package

Introduction to Exception Handling
Why use Exception Handling, Fundamentals of Exception Handling, Exceptions & their types, Common Exceptions

Using Exception Handling
Using try and catch, Multiple Catch Statements, Nested try Statements, Methods available to Exceptions

Throwing your own Exception
Throw statement, Throws statement, Using finally, Creating your own exceptions

Multithreading
The Main Thread, Creation of a thread, Creating Multiple Threads, Life cycle of a thread, Controlling and getting information of Threads

Advanced Multithreading
Thread Priority, Thread Groups, Synchronization, Interthread Communication, Deadlock

Writing Applets
The Basics of Applets, Life Cycle of an Applet, Painting the Applet, The Applet Tag, Security
Restrictions when using Applets

Taking Advantage of the Applet API
Finding and Loading Data Files, Displaying Short Status Strings, Displaying Documents in the Browser
Playing Sounds, Defining and Using Applet Parameters

The Graphics Class
java.awt.Graphics, uses of class java.awt.Graphics

Custom Painting
Drawing Lines, Drawing Rectangles, Drawing Ellipses and Circles, Drawing Ares, Drawing Polygons

CJP7 - 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,

## Counseling and Study Structure

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## Study Modules & Books Information

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PROGRAM-GUIDE

CERTIFICATE IN C++ (CC)

• Scheme of Examination
• Detailed Syllabus
• Counseling and Study Structure
• Study Modules & Books Information
**Certificate in C++ (CC)**

(A) **Duration**: 3 Months
(B) **Eligibility**: 10th Pass
(C) **Courses**: 03
(D) **Courses**: 03
(E) **Credit**: Non-Credit

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Key Learning Outcomes:
- Understand the difference between procedure oriented programming & OOPs.
- Ability to construct, compile, link & execute the C++ programs.
- Understand function declaration and pointer.
- Familiarity with electrical safety, fire safety, first aid, food safety, primary health and basic hygiene.
- Basic communication skills
- Personality grooming

**Note:** For a PASS - A Student would require to secure 40% for both Theory and Practical.

<table>
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Detailed Syllabus

CC1 - OOPS CONCEPTS & 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 Resolution Operator, 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 as Function Arguments.

Constructors And Destructors -: Introduction, Constructors, Parameterized Constructors, Multiple Constructors with Default Arguments, Dynamic Initialisation of Objects, Copy Constructors, Dynamic Constructos, 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 Overloading Operators, 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.

The C++ I/O system basics: C++ streams, The basic stream classes: C++ predefined streams, Formatted I/O: Formatting using the ios members, Setting the format flags, Clearing format flags, An overloaded form of setf(), Examining the formatted flags, Setting all flags, Using width() precision() and fill(), Using manipulators to format I/O.

CC2- 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.

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**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.

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**CC3-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
COUNSELING AND STUDY STRUCTURE

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<th>Sl. No.</th>
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STUDY MODULES & BOOKS INFORMATION

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<th>Subject Name</th>
<th>Modules to be used</th>
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<td>Communication and Personality Development</td>
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PROGRAM-GUIDE

CERTIFICATE IN COMPUTER CONCEPTS (CCC)

• Scheme of Examination
• Detailed Syllabus
• Counseling and Study Structure
• Study Modules & Books Information
Certificate in Computer Concepts (CCC)

(A) Duration : 3 Months

(B) Eligibility : 10th Pass

(C) Contents and Scheme of Examination

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Key Learning Outcomes

- Understand functions, components of a computer system, storage devices & their physical structure & working.
- Understand operating system & file system
- Understand & use computer networks
- Familiarity with safety, first aid, food safety, primary health and basic hygiene
- Understand booting process of OS & file system, installation
- Understand Windows: accessories & system tools.
- Understand advanced features of Windows & setup Network connection.
- Ability to use advanced features in MS Word like inserting word art, shapes, clipart, charts, smart arts, symbols, graphs etc. in a document/slide.
- Understand using various formulas, function in Excel.
- Understanding importing & exporting excel sheets to/from various formats
- Basic communication skills
- Personality grooming
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- Understand basics of web browsers, concepts of search engines and web protocols.
- Ability to install & configure email client software.
- Understand data transmission protocols, client-server architecture, FTP and its usages.
- Understand know-how of HTML, design tools, HTML editors, various issues in website creation and maintenance, FTP software for uploading website.
- Ability to comprehend HTML, concepts, versions, elements, tags etc.
- Ability to create effective and structured web pages using HTML.
- Familiarity with MS front page/Macromedia Dreamweaver/ MS expression web etc HTML editors.

**Note:** For a PASS - A Student would require to secure 40% for both Theory and Practical.

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<th>Grand Total</th>
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Detailed Syllabus

CCC1 - 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.


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-brokering, Production planning
and Control, Purchasing, Banking, Credit and Collection, Warehousing. Use of computers in common public services and e-governance. Various e-governance initiatives in India.

**CCC2: 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.

**CCC3 - OPERATING SYSTEMS (DOS, WINDOWS) & MS OFFICE (WORD, EXCEL, POWERPOINT)**

Fundamentals 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, Volume Control. 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 password etc. Accessibility Features of Windows.-Sharing Information between Programs, sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers - Understanding OLE - Embed/Link Using Cut and Paste and Embed/Link Using Insert Object - Manage Embedded/Linked Object.

**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.

**CCC4 - 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

**CCC5 - INTERNET AND E-MAIL**

Internet: Evolution, Concepts, Internet Vs Intranet, Growth of Internet, ISP, ISP in India, Types of connectivity - Dial-up, Leased line, DSL, Broadband, RF, VSAT etc., Methods of sharing of Internet connection, Use of Proxy server.

Internet Services – USENET, GOPHER, WAIS, ARCHIE and VERONICA, IRC


TCP/IP and others main protocols used on the Web.


Introduction to WYSIWYG Design tools for HTML, Overview of MS FrontPage, Macromedia Dream weaver, and other popular HTML editors, designing web sites using MS FrontPage/Expression Web.

Cascading Style sheets – defining and using simple CSS.


E-Mail: Concepts, POP and WEB Based E-mail, merits, address, Basics of Sending & Receiving, E-mail Protocols, Mailing List, Free E-mail services, e-mail servers and e-mail clients programs. Creating messages, Attaching
documents with e-mail, Customizing messages, Sending your messages, add tracing to your message, Maintaining and Using Address book, Apply Junk e-mail filter, Replying to messages, add graphics and images to your messages, Flagging messages, Using Signatures in emails, Send/Receive e-mails to groups, add and remove contacts, import contacts, print email messages, create emails in Indian languages.

### COUNSELING AND STUDY STRUCTURE

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### STUDY MODULES & BOOKS INFORMATION

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PROGRAM-GUIDE

CERTIFICATE IN APPLICATION SOFTWARE (CAS)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Certificate in Application Software (CAS)

(A) Duration : 3 Months
(B) Eligibility : 10th Pass
(C) Contents and Scheme of Examination

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**Note:** For a PASS - A Student would require to secure 40% for both Theory and Practical.

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</table>
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.


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 services and e-governance. Various e-governance initiatives in India.

**CAS2 - 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.

**CAS3 - OPERATING SYSTEMS & MS OFFICE**

Fundamentals 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.

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, Volume Control. 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 password etc. Accessibility Features of Windows.-Sharing Information between Programs, sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers - Understanding OLE - Embed/Link Using Cut and Paste and Embed/Link Using Insert Object - Manage Embedded/Linked Object.

**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 SmartArts, 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 SmartArts, 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.

**CAS4-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

**CAS5 - INTERNET AND E-MAIL**

Internet: Evolution, Concepts, Internet Vs Intranet, Growth of Internet, ISP, ISP in India, Types of connectivity - Dial-up, Leased line, DSL, Broadband, RF, VSAT etc., Methods of sharing of Internet connection, Use of Proxy server.

Internet Services – USENET, Gopher, WAIS, Archie and Veronica, IRC


TCP/IP and others main protocols used on the Web.

Concepts of Hypertext, HTML introduction, features, uses & versions Using various HTML tags, Elements of HTML syntax, Head & Body Sections, Inserting texts, Text alignment, Using images in pages, Hyperlinks – text and images, bookmarks, Backgrounds and Color controls, creating and using Tables in HTML, and presentation,

Use of font size & Attributes, List types and its tags.

Introduction to WYSIWYG Design tools for HTML, Overview of MS FrontPage, Macromedia Dreamweaver, and other popular HTML editors, designing web sites using MS FrontPage/Expression Web.

Cascading Style sheets – defining and using simple CSS.


E-Mail: Concepts, POP and WEB Based E-mail, merits, address, Basics of Sending & Receiving, E-mail Protocols, Mailing List, Free E-mail services, e-mail servers and e-mail clients programs. Creating messages, Attaching documents with e-mail, Customizing messages, Sending your messages, add tracing to your message, Maintaining and Using Address book, Apply Junk e-mail filter, Replying to messages, add graphics and images to
your messages, Flagging messages, Using Signatures in emails, Send/Receive e-mails to groups, add and remove contacts, import contacts, print email messages, create emails in Indian languages.

**CAS6 - INTRODUCTION TO APPLICATION SOFTWARE**

(Choose any one from –Photoshop, PageMaker, CorelDraw, Tally, Outlook Express, MS-Access& AutoCad)

**PHOTOSHOP**

Adobe Photoshop : introduction, features, starting Photoshop, interface details, open an image, navigation and viewing modes, Rulers and guides, saving image, close Photoshop.

Digital Image basics - Introduction, file size, modes and channels, bit depth, Hue, Saturation and Brightness, colors and light, file formats, resolution, calculate file size, re-sampling, RGB and CYMK model, printer setting, preview images, convert to grayscale, printing document.

Layers : introduction, layer types, channels, adjustment layers, layer mask, working with layers and masks, layer blends, sample blend, advanced bending techniques

using selection tools, modify your selection, saving and loading selections, feather and anti alias, defringe and matting, Using Magic wand, quick mask, color range, channel masking, extract filter

controlling tones, retouching images, using special effects - Layer comps, Gradient maps, cast shadow, posterization, cross process effect, digital diffusion


Image slicing for Web. Save file as PDF.

**PAGEMAKER**


Drawing Text Box, Writing Text, Insert Pages, 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, using 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.
**CORELDraw**

Introduction to CorelDraw – Understanding vector drawing, various features of CorelDraw, Understanding Interface – Menu bar, Property bar, Toolbar, Title bar, Rulers, Toolbox, Drawing window, Drawing page, Docker window/palette, Color palette, Status bar, Document navigator, Navigator, CorelDRAW terminology and concepts, CorelDraw workspace tools

Creating a New document, Open a previous built document, use prebuilt templates, draw some object, write some text using text tool, import graphics and text in document, arrange objects, filled in color, resizing objects, undo, redo and repeat action, save file, backup a file, export a file, zoom view, close file.

Drawing objects – making square, rectangle, circles, triangles and other basic shapes, fill color, fill patterns, grouping objects, select, move copy and resizing objects, cloning objects, making lines & curves, Bezier curve, eraser use, Polly tool, brush mode, calligraphic mode, preset mode, spray mode, artistic media tools, text and object creation & removal, making spiral and arrow shapes, flowchart shapes, star shapes etc, create callout, making graph paper.

Page and document setup – page size, layout, background setup, insert a page, delete a page, using rulers, grids and guidelines.

Filling and patterns- Filling objects with colors and pattern, using solid, bitmap, wignet, postscript colors and patterns, interactive and mesh fills.

Using Text – Insert Text, Using Fonts and Sizes, Editing Text, Aligning and spacing text, Setting colors, Text fitting on Path, Changing case of text, text skew and rotation, transform text, rotate text, find and replace text, Wrapping paragraph text around objects and text, Working with symbols.

Special Effects – Envelop tool, blending, PowerClip, shadow, transparencies, distortion tools, smudge tool, cantor tool, lens effect, convert bitmap to vector, bitmap filter, creation a Wignet.


Printing in CorelDraw – Print document from coreldraw, PS file, EPS file, PDF file, Print Preview, Color separation.

**TALLY**

Basic Concepts of Accounting, Financial Statements, Financial Statement Analysis, Cost Centre, Basic concepts of Inventory Tally Configuration & INI setup, Data Directory & Folders configuration, Single & Multiple User, Tally Screen Components, Mouse / Keyboard Conventions & Key, Combinations, Switching between screen areas, Quitting Tally. Maintaining Company Data, Basic Company Details, Create/ Alter/ Select/ Load/ Close a Company, Chart of Accounts, Company Features, Configuration.

Create, Alter & Display Groups and Ledgers, All accounting voucher types and transactions, Create and Alter new Voucher type, Item and Account Invoice transactions, Excise Invoice, Export Invoice, Transactions using Bill-wise details Create, Alter & Display Cost Centre and Cost Categories, Cost centre & Cost Category allocation in voucher entry, Creating Cost centre Class, Invoice entry in a Class situation, Create, Alter & Delete Foreign Currencies, Voucher entry using foreign currency, Bank Reconciliation, Interest calculations using simple & advance parameters, Interest calculations on outstanding balances & on invoices, Use of voucher class, adjustment of interest, Creation of voucher class, Invoice entry in a class situation.

Create, Alter & Delete Budgets for groups, ledgers & cost centres, Defining credit limit & credit period, Display Budgets & variances, Create, Alter & Delete a scenario. Enabling Job Costing in Tally, Master creation

Create, Alter & Display Stock Groups and Stock Items, Stock item behaviour using costing and market valuation method, other behaviour like treating all sales as new manufacture, treating all purchases as consumed, treating all rejections inward as scrap, ignoring negative balances, Treating difference due to physical counting, Create, Alter & Display Stock categories, Create, Alter, Display simple & compound units of measures, Stock items using alternate units, Defining standard cost & selling price, Defining Rate of duty, Defining MRP, Create, Alter & Display Godowns, Allocation of items to the Godowns, All inventory voucher types and transactions, Inventory details in accounting vouchers, Defining re-order level, Transactions using tracking numbers, Use of batch-wise details in voucher, Additional cost details in vouchers, Creating Bill of material, Cost estimation, Creating Price list & defining Price levels, invoice using Price list, Zero valued entries, Transactions in case of Different actual & billed quantities. Reports like Stock summary, Inventory books like Stock item, Group summary, Stock transfers, Physical stock register, Movement analysis, Stock group & item analysis, stock category analysis, Ageing analysis, Sales order & Purchase order book, Statement of inventory related to Godowns, categories, stock query, Reorder status, Purchase & Sales order summary, Purchase & Sales bill pending, Exception reports like negative stock & ledger, overdue receivables & payables, memorandum vouchers, optional vouchers, post-dated vouchers, reversing journals.

Cheque Printing, Common printing options, Different printing formats, Multi-Account printing, Dynamic- Report specific options. Creating Group company, Use of Tally vault, Using Security control & defining different security levels, Use of Tally Audit. Back-up & Restore, Splitting company data, Export & import of Data, ODBC compliance, use of E-mail, Internet publishing, Upload, web browser & online help, Re-write data.

**OUTLOOK EXPRESS**


**Working with E-mails** : Creating a new e-mail message, Creating and adding signatures, Setting other message options, Sending messages, Viewing received messages, Responding to a message, Working with junk e-mails, Printing a message.

**Adding and Managing Contacts** : Creating a new contact, Adding a picture to a contact, Recording journal entries, Working with distribution lists, Sharing contact information, Importing a list of contacts from other programmes.

**Working with Calender** : Viewing your calendar, Working with appointments, Planning a meeting, Scheduling an event, Adding holidays to your calendar, Sharing calendar information

**Working with Tasks and Notes** : Creating a task, Setting a task as a recurring task. Assigning a task, Viewing your assigned tasks, Marking a task as complete, Sending status report about an assigned task, Creating notes, Viewing notes.
Managing Files and Folders: Setting the start up folder, Creating a new folder, Viewing items and folders using outlook today, Copying an item to another folder, Moving an item to another folder, Creating a message rule, Archiving data, Importing and exporting items, Backing up and restoring a data file, Cleaning up the mailbox, Emptying out the deleted items folder, Setting security and privacy options.

MS ACCESS


Introduction to Tables in Microsoft Access 2010: Creating a table, Saving a table, Working with fields in a table, Understanding data types, Entering records in a table, Adding validation to the table, Understanding the primary and foreign keys, Understanding the relationship between tables.

Working with Queries: Introducing query types, Creating a query, Saving a query, Working with fields in a query, Specifying criteria in a query field, Working with the action query.

Creating Forms in MS Access 2010: Introducing forms, Creating forms in MS Access 2010, Saving and closing a form, Creating some special types of forms, Introducing controls in a form, Classifying the form controls, Working with views in a form, Displaying the header and footer, Formatting a form, Modifying a form.


AUTOCAD

Create a simple drawing: Starting AutoCAD, AutoCAD’s screen layout, Command line and using the keyboard, Using your pointing device, Opening an existing drawing file, AutoCAD’s Cartesian workspace, Drawing lines, Erasing objects, Drawing lines with Direct Distance Entry and Polar Tracking, Drawing rectangles, Drawing circles, Drawing with Grid and Snap, Viewing your drawing, Undo, Saving your work, Exiting AutoCAD, Command summary. [Practice exercises will follow each topic so the student will understand and use the command or function immediately after it is explained and discussed. Project exercises will be assigned as needed. Student will practice on specific drawings related to Outcomes and Indicators. Testing to evaluate successful accomplishment of stated Outcome and Indicators].

Making your drawings more precise: Using Object Snaps, Object Snap Overrides, Polar Tracking settings, Object Snap tracking, Command summary, Selecting objects for, editing, Moving objects, Copying objects, Rotating objects, Scaling objects, Command summary. [Practice exercises and will follow each topic so the student will understand and use the command or function immediately after it is explained and discussed. Student will practice on specific drawings related to Outcomes and Indicators. Testing to evaluate successful accomplishment of stated]  

Drawing organization and information: Creating new drawings with templates, What are layers?, Layer state, Changing an objects layer, Command summary, Drawing arcs, Polylines, Converting polylines to lines and arcs. Converting lines and arcs to polylines, Command summary, Measuring a distance, Measuring an area, Information about objects, Command summary. [Practice exercises and will follow each topic so the student will understand and use the command or function immediately after it is explained and discussed. Project exercises
will be assigned as needed. Student will practice on specific drawings related to Outcomes and Indicators. Testing to evaluate successful accomplishment of stated Outcome and Indicators.

Creating more complex objects – Trim, Extend, Fillet, Chamfer, Offsetting objects, Mirroring objects, Creating arrays of objects, Command summary, What are blocks?, Inserting blocks, Using DesignCenter to insert blocks [Practice exercises and will follow each topic so the student will understand and use the command or function immediately after it is explained and discussed. Project exercises will be assigned as needed. Student will practice on specific drawings related to Outcomes and Indicators. Testing to evaluate successful accomplishment of stated Outcome and Indicators].

Preparing to print - Printing concepts, Working in layouts, Creating a new layout, Guidelines for layouts, Command summary, Plot command, Plot settings, Plot preview, Command summary. [Practice exercises and will follow each topic so the student will understand and use the command or function immediately after it is explained and discussed. Project exercises will be assigned as needed. Student will practice on specific drawings related to Outcomes and Indicators. Testing to evaluate successful accomplishment of stated Outcome and Indicators].

Annotating your drawing - Adding multi-line text, Formatting multi-line text, Editing multi-line text, Other text tools, Spell checking, Command summary, Hatching, Editing hatch patterns, Command summary, Dimension concepts, Adding single dimensions, Other dimension tools, Quick dimensions, Basic leaders, Editing dimensions, Selecting a dimension style, Command summary

**COUNSELING AND STUDY STRUCTURE**

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<td>Fundamental of Computers &amp; Information Technology</td>
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<td>Introduction to Application Software (Choose any from Photoshop, PageMaker, Corel Draw, Tally, Outlook Express, MS Access &amp; AutoCad)</td>
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PROGRAM-GUIDE

CERTIFICATE FOR DATA ENTRY OPERATOR (CDEO)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
CERTIFICATE FOR DATA ENTRY OPERATOR (CDEO)

(A) Duration: 3 Months
(B) Eligibility: 10th Pass
(C) Contents and Scheme of Examination

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<th>Theory</th>
<th>Practical Marks</th>
<th>Assignments</th>
<th>Key Learning Outcomes</th>
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</table>
| CDEO1       | Fundamentals of Computers & Information Technology | Non Credit | 100 | 100 | 40 | - | - | • Understand functions of components of a computer, system, storage devices & their physical structure & working.  
• Understand operating system & file system  
• Understand use of computer networks |
| CDEO2       | Safety Practices in the Work Environment | Non Credit | 100 | 70 | 28 | 30 | 12 | • Familiarity with safety, first aid, food safety, primary health and basic hygiene |
| CDEO3       | Operating System (DOS, Windows) | Non Credit | 100 | 70 | 28 | 30 | 12 | • Understand booting process of OS & file system, installation  
• Understand Windows: accessories & system tools.  
• Understand advanced features of Windows & Setup Network connection. |
| CDEO4       | Communication and Personality Development | Non Credit | 100 | 100 | 40 | - | - | • Basic communication skills  
• Personality grooming |
| CDEO5       | MS-Office (Word, Excel, PowerPoint) | Non Credit | 100 | 70 | 28 | 30 | 12 | • Understand creation & printing a document/presentation & excel sheet in MS Office.  
• Ability to use advanced features in MS Word like inserting word art, shapes, clipart, charts, smart arts, symbols, graphs etc. in a
• Ability to use various formulas, function in Excel.
• Understand importing & exporting excel sheets to/from various formats.

Note: For a PASS - A Student would require to secure 40% for both Theory and Practical.

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Detailed Syllabus

CDEO1 - 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.


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-brokering, Production planning and
Control, Purchasing, Banking, Credit and Collection, Warehousing. Use of computers in common public services and e-governance. Various e-governance initiatives in India.

**CDEO2 - 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 extinguisher - 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.

**CDEO3 - 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.

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

Using Media Player, Sound Recorder, Volume Control. 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 password etc. Accessibility Features of Windows. - Sharing Information between Programs, sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers - Understanding OLE - Embed/Link Using Cut and Paste and Embed/Link Using Insert Object - Manage Embedded/Linked Object.

CDEO4 - 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,


CDEO5 - 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 SmartArts, 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 SmartArts, 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.

Introduction to WYSIWYG Design tools for HTML, Overview of MS FrontPage, Macromedia Dreamweaver, and other popular HTML editors, designing web sites using MS FrontPage/Expression Web.

Cascading Style sheets – defining and using simple CSS.


E-Mail: Concepts, POP and WEB Based E-mail, merits, address, Basics of Sending & Receiving, E-mail Protocols, Mailing List, Free E-mail services, e-mail servers and e-mail clients programs. Creating messages, Attaching documents with e-mail, , Customizing messages , Sending your messages, add tracing to your message, Maintainingand Using Address book, Apply Junk e-mail filter, Replying to messages, add graphics and images to your messages, Flagging messages, Using Signatures in emails, Send/Receive e-mails to groups, add and remove contacts, import contacts, print email messages, create emails in Indian languages.
## Counseling and Study Structure

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Hours of Study</th>
<th>Counseling and Study Structure (hours)</th>
<th>Face to Face Counseling</th>
<th>Self Study</th>
<th>Practical</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>1</td>
<td>CDEO 1</td>
<td>Fundamental of Computers &amp; Information Technology</td>
<td>Non-Credit</td>
<td>60</td>
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<td>17</td>
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<td>CDEO 3</td>
<td>Operating System (DOS, Windows)</td>
<td>Non-Credit</td>
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<td>8</td>
<td>34</td>
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<tr>
<td>4</td>
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<td>Communication and Personality Development</td>
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<td>5</td>
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<td>MS-Office (Word, Excel, PowerPoint)</td>
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</table>

## Study Modules & Books Information

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Course Code</th>
<th>Subject Name</th>
<th>Modules to be used</th>
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<tr>
<td>1</td>
<td>CDEO 1</td>
<td>Fundamentals of Computers &amp; Information Technology</td>
<td>S01 - Fundamentals of Computers &amp; Information Technology</td>
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<td>3</td>
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<td>Operating System, (DOS, Windows)</td>
<td>S02 - Disk Operating System, S18 - MS-Windows</td>
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<td>4</td>
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<td>Communication and Personality Development</td>
<td>S68: Effective Communication &amp; Personality Development</td>
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<td>5</td>
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<td>MS-Office (MS-Word, Excel, PowerPoint)</td>
<td>S19 - MS-Word, S20 - MS-Excel, S25 - MS-Power Point</td>
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PROGRAM-GUIDE

CERTIFICATE IN WORD PROCESSING/ TYPEWRITING (HINDI/ENGLISH) (CWP)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Certificate in Word Processing/Typewriting (Hindi/English) (CWP)

<table>
<thead>
<tr>
<th>(A) Duration :</th>
<th>4 Months</th>
<th>(D) Courses :</th>
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<td>(B) Eligibility :</td>
<td>8th Pass</td>
<td>(E) Credit :</td>
<td>Non-Credit</td>
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<td>(C) Contents and Scheme of Examination</td>
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<th>Total Marks</th>
<th>Theory</th>
<th>Practical Marks</th>
<th>Assignments</th>
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<tr>
<td>CWP 2</td>
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<td>Non Credit</td>
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<td>28</td>
<td>30</td>
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<tr>
<td>CWP 3</td>
<td>Operating System (DOS, Windows)</td>
<td>Non Credit</td>
<td>100</td>
<td>70</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>CWP 4</td>
<td>Communication and Personality Development</td>
<td>Non Credit</td>
<td>100</td>
<td>100</td>
<td>40</td>
<td>-</td>
</tr>
<tr>
<td>CWP 5</td>
<td>MS-Office (Word, Excel, PowerPoint)</td>
<td>Non Credit</td>
<td>100</td>
<td>70</td>
<td>28</td>
<td>30</td>
</tr>
</tbody>
</table>

Key Learning Outcomes:
- Understand functions of components of a computer system, storage devices & their physical structure & working.
- Understand operating system & file system.
- Understand & use computer networks.
- Familiarity with safety, first aid, food safety, primary health and basic hygiene.
- Understand booting process of OS & file system, installation.
- Understand Windows: accessories & system tools.
- Understand advanced features of Windows & Setup Network connection.
- Basic communication skills.
- Personality grooming.
- Understand creation & printing a document/presentation & excel sheet in MS Office.
- Ability to use advanced features in MS Word like inserting word art, shapes, clipart, charts, smart arts, symbols, graphs etc. in a document/slide.
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<th>CWP 6</th>
<th>Methods and Techniques of Typewriting</th>
<th>Non Credit</th>
<th>100</th>
<th>70</th>
<th>28</th>
<th>30</th>
<th>12</th>
<th>-</th>
<th>-</th>
</tr>
</thead>
</table>

- Ability to use various formulas, function in Excel.
- Understand importing & exporting excel sheets to/from various formats.
- Ability to comprehend sight & touch method of typewriting
- Understand techniques of typewriting
- Understand keyboard basics
- Familiarity with the use of MS Office basics

**Note:** For a PASS - A Student would require to secure 40% for both Theory and Practical.

<table>
<thead>
<tr>
<th>Grand Total</th>
<th>Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>600</td>
<td>240</td>
</tr>
</tbody>
</table>
Detailed Syllabus

CWP 1 - 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.

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.


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**CWP3 - OPERATING SYSTEMS**

Fundamentals 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.

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

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**CWP4-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

**CWP5- 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

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of Columns & Rows; Working with Data & Ranges; Different Views of Worksheets; Zooming, Column Freezing,
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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 SmartArts, 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.

**CWP6 - METHODS AND TECHNIQUES OF TYPEWRITING**

Introduction of typewriter, Typewriter – its use and importance, Makes and categories of typewriters, Essential
parts of a typewriter and their uses.

Care and upkeep of a typewriter, Paper feeding, Ribbon changing and ribbon economy.

Methods of Typewriting : Slight method, Touch method.

Techniques of Typewriting : Position of the machine, Size of table and chair, Sitting position of the typist, Rhythm
in typewriting, Feeding of paper into the machine, Fixing of margins, Warning bell, Kinds and sizes of types, line
spaces and paper.


Important Operations of the Keyboard : Paper feeding, Fixing of margins, Changing the line, New paragraph,
Taking out the paper; Keyboard and Finger Chart.

Speed Development : daily pre-practice exercises (finger operations), Accuracy and speed development
(operational exercises, Instructions for speed and accuracy development (mental exercises); Spacing in
punctuation; Syllabification; Errors in typing; Calculation of speed.
## Counseling and Study Structure

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Hours of Study</th>
<th>Counseling and Study Structure (hours)</th>
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<td>Face to Face Counseling</td>
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<td>2</td>
<td>CWP2</td>
<td>Safety Practices in the Work Environment</td>
<td>Non-Credit</td>
<td>30</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>CWP3</td>
<td>Operating System (DOS, Windows)</td>
<td>Non-Credit</td>
<td>60</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>CWP4</td>
<td>Communication and Personality Development</td>
<td>Non-Credit</td>
<td>30</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>CWP5</td>
<td>MS-Office (MS-Word, Excel, Power Point)</td>
<td>Non-Credit</td>
<td>60</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>CWP6</td>
<td>Methods and Techniques of Typewriting</td>
<td>Non-Credit</td>
<td>60</td>
<td>8</td>
</tr>
</tbody>
</table>

## Study Modules & Books Information

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Course Code</th>
<th>Subject Name</th>
<th>Modules to be used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CWP1</td>
<td>Fundamental of Computers &amp; Information Technology</td>
<td>S01 - Fundamentals of Computers &amp; Information Technology</td>
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<tr>
<td>3</td>
<td>CWP3</td>
<td>Operating System (DOS, Windows)</td>
<td>S02 - Disk Operating System</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>S18 - MS-Windows</td>
</tr>
<tr>
<td>4</td>
<td>CWP4</td>
<td>Communication and Personality Development</td>
<td>S68: Effective Communication &amp; Personality Development</td>
</tr>
<tr>
<td>5</td>
<td>CWP5</td>
<td>MS-Office (MS-Word, Excel, Power Point)</td>
<td>S19 - MS-Word, S20 - MS-Excel S25 - MS-Power Point</td>
</tr>
<tr>
<td>6</td>
<td>CWP6</td>
<td>Methods and Techniques of Typewriting</td>
<td>V 40 : Typewriting</td>
</tr>
</tbody>
</table>
PROGRAM-GUIDE

CERTIFICATE IN PHOTOCOPY OPERATION AND MAINTENANCE (CPOM)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Certificate in Photocopy Operation and Maintenance (CPOM)

(A) **Duration**: 03 Months  
(B) **Eligibility**: 10th Pass  
(C) **Contents and Scheme of Examination**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Marks</th>
<th>Theory</th>
<th>Practical</th>
<th>Assignments</th>
<th>Key Learning Outcomes</th>
</tr>
</thead>
</table>
| CPOM 1      | Introduction to Photocopier and Copying Process | Non-Credit | 100 | 70 | 28 | 30 | 12 | - | - | • Understand constructional features and working of a photocopier  
|             |                     |        |             | Max | Min | Max | Min | Max | Min | • Understand copying process |
| CPOM 2      | Safety Practices in the Work Environment | Non-Credit | 100 | 70 | 28 | 30 | 12 | - | - | • Familiarity with safety, first aid, food safety, primary health and basic hygiene |
| CPOM 3      | Communication and Personality Development | Non-Credit | 100 | 100 | 40 | - | - | - | - | • Basic communication skills  
|             |                     |        |             |     |     |     |     |     |     | • Personality grooming |
| CPOM 4      | Different Working Sections of Photocopier | Non-Credit | 100 | 70 | 28 | 30 | 12 | - | - | • Understand drum assembly and paper feeding mechanism and familiarity with general maintenance of a photocopier |

**Note:** For a PASS - A Student would require to secure 40% for both Theory and Practical.

<table>
<thead>
<tr>
<th>Grand Total</th>
<th>Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>160</td>
</tr>
</tbody>
</table>
Detailed Syllabus

**CPOM 1 - INTRODUCTION TO PHOTOCOPIER AND COPYING PROCESS**

Features and Specifications of Machine; Power Supply and Installation of the Machine; Mounting Drum, Adding Toner / Replacing Cartridge.

Basic Operation; Additional Features of the Machine.

**CPOM2 - 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.

**CPOM3 - 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,

**CPOM 4—DIFFERENT WORKING SECTIONS OF PHOTOCOPIER**


Daily Inspection and Maintenance; Periodical Servicing Schedule.

**COUNSELING AND STUDY STRUCTURE**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Hours of Study</th>
<th>Counseling and Study Structure (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Face to Face Counseling</td>
</tr>
<tr>
<td>1</td>
<td>CPOM 1</td>
<td>Introduction to Photocopier and Copying Process</td>
<td>Non-Credit</td>
<td>60</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>CPOM 2</td>
<td>Safety Practices in the Work Environment</td>
<td>Non-Credit</td>
<td>30</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>CPOM 3</td>
<td>Communication and Personality Development</td>
<td>Non-Credit</td>
<td>30</td>
<td>4</td>
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<tr>
<td>4</td>
<td>CPOM 4</td>
<td>Different Working Sections of Photocopier</td>
<td>Non-Credit</td>
<td>60</td>
<td>8</td>
</tr>
</tbody>
</table>

**STUDY MODULES & BOOKS INFORMATION**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Course Code</th>
<th>Subject Name</th>
<th>Modules to be used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CPOM 1</td>
<td>Introduction to Photocopier and Copying Process</td>
<td>Repair and Maintenance of Photocopier and Fax Machine, NIMI, Chennai</td>
</tr>
<tr>
<td>3</td>
<td>CPOM 3</td>
<td>Communication and Personality Development</td>
<td>S68: Effective communication &amp; personality development</td>
</tr>
<tr>
<td>4</td>
<td>CPOM 4</td>
<td>Different Working Sections of Photocopier</td>
<td>Repair and Maintenance of Photocopier and Fax Machine, NIMI, Chennai</td>
</tr>
</tbody>
</table>
PROGRAMME-GUIDE

CERTIFICATE IN SPOKEN ENGLISH (CSE)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Certificate in Spoken English (CSE)
सर्टिफिकेट इन स्पोकेन इंग्लिश (CSE)

(A) Duration : 03 Months
(B) Eligibility : 10th Pass
(C) Contents and Scheme of Examination

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Marks</th>
<th>Theory</th>
<th>Pract.Marks</th>
<th>Assignments</th>
<th>Key Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE 1</td>
<td>Grammar Structure</td>
<td>Non-Credit</td>
<td>100</td>
<td>40</td>
<td>0</td>
<td>0</td>
<td>• Familiarization with English grammar structure</td>
</tr>
<tr>
<td>CSE 2</td>
<td>Safety Practices in the Work Environment</td>
<td>Non-Credit</td>
<td>100</td>
<td>70</td>
<td>28</td>
<td>12</td>
<td>• Familiarity with safety, first aid, food safety, primary health and basic hygiene</td>
</tr>
<tr>
<td>CSE 3</td>
<td>Learning and Practicing Sentences for Conversations</td>
<td>Non-Credit</td>
<td>100</td>
<td>100</td>
<td>40</td>
<td>0</td>
<td>• Understanding of words and sentences for conversations</td>
</tr>
<tr>
<td>CSE 4</td>
<td>Communication and Personality Development</td>
<td>Non-Credit</td>
<td>100</td>
<td>100</td>
<td>40</td>
<td>0</td>
<td>• Basic communication skills</td>
</tr>
<tr>
<td>CSE 5</td>
<td>Written and Verbal Conversations for</td>
<td>Non-Credit</td>
<td>100</td>
<td>100</td>
<td>40</td>
<td>0</td>
<td>• Skill in written and verbal conversations</td>
</tr>
</tbody>
</table>

Note: For a PASS - A Student would require to secure 40% for both Theory and Practical.

<table>
<thead>
<tr>
<th>Grand Total</th>
<th>Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>200</td>
</tr>
</tbody>
</table>
Detailed Syllabus

**CSE 1: GRAMMAR STRUCTURE**

The Sentence, Subject and Predicate, Noun, Pronoun, Adjective, Verb, Auxiliaries, Adverb, Preposition, Conjunction, Article.

Kinds of Sentences, Tenses, Parts of a Simple Sentence, Direct and Indirect Speech, Punctuation Marks, Practise Exercises.

**CSE 2: 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.

**CSE 3: LEARNING AND PRACTICING WORDS AND SENTENCES FOR CONVERSATIONS**

Words Commonly Misspell, Phrasal Verbs, Confused and Misused Words, Recall Words from Parts of Speech, Prefix, Suffix, Verb, Vocabulary Builder, Word Power, Practice Exercise.

Paragraph Writing, Story Writing, Writing Stories from Pictures, Letter Writing, Essay Writing, Practise Exercises.
CSE4-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,


CSE 5: Written and Verbal Conversations

Authoritative Sentences, Exclamation, Making Simple Sentences, Translate English to Hindi, Translate Hindi to English.

# Counseling and Study Structure

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Hours of Study</th>
<th>Counseling and Study Structure (hours)</th>
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<td>Face to Face Counseling</td>
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<td>1</td>
<td>CSE 1</td>
<td>Grammar Structure</td>
<td>Non-Credit</td>
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</tr>
<tr>
<td>2</td>
<td>CSE 2</td>
<td>Safety Practices in the Work Environment</td>
<td>Non-Credit</td>
<td>30</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>CSE 3</td>
<td>Learning and Practicing Work and Sentences for Conversations</td>
<td>Non-Credit</td>
<td>60</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>CSE 4</td>
<td>Communication and Personality Development</td>
<td>Non-Credit</td>
<td>30</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>CSE 5</td>
<td>Written and Verbal Conversations</td>
<td>Non-Credit</td>
<td>60</td>
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</table>

# Study Modules & Books Information

<table>
<thead>
<tr>
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<th>Subject Name</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CSE 1</td>
<td>Grammar Structure</td>
<td>i)  E 01 : Basic English Grammar Structure</td>
</tr>
<tr>
<td>3</td>
<td>CSE 3</td>
<td>Learning and Practicing Words and Sentences for Conversations</td>
<td>E 02 : Basic English Word Power</td>
</tr>
<tr>
<td>4</td>
<td>CSE 4</td>
<td>Communication and Personality Development</td>
<td>S68: Effective Communication &amp; Personality Development</td>
</tr>
<tr>
<td>5</td>
<td>CSE 5</td>
<td>Written and Verbal Conversations</td>
<td>E 03 : Basic English Writing Skills E 04 : Basic English Communicative English</td>
</tr>
</tbody>
</table>
PROGRAMME-GUIDE

CERTIFICATE IN DESK TOP PUBLISHING (CDTP)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
### Certificate in Desk Top Publishing (CDTP)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Marks</th>
<th>Theory</th>
<th>Practical Marks</th>
<th>Assignments</th>
<th>Key Learning Outcomes</th>
</tr>
</thead>
</table>
| CDTP1       | Fundamentals of Computers & Information Technology                                | Non    |             | 100    | 100             | 40          | • Understand functions and components of a computer system, storage devices & their physical structure & working.  
• Understand operating system & file system  
• Understand & use computer networks                                                                 |
| CDTP2       | Safety Practices in the Work Environment                                          | Non    |             | 100    | 70              | 28          | • Familiarity with safety, first aid, food safety, primary health and basic hygiene                                                                 |
| CDTP3       | Operating System (DOS, Windows) & MS-Office (Word, Excel, PowerPoint)             | Non    |             | 100    | 70              | 28          | • Understand booting process of OS & file system, installation  
• Understand Windows: accessories & system tools.  
• Understand advanced features of Windows & setup network connection.  
• Ability to use advanced features in MS Word like inserting word art, shapes, clipart, charts, smart arts, symbols, graphs etc. in a document/slide.  
• Understand using various formulas, function in Excel.  
• Understand importing & exporting excel sheets to/from various formats. |
| CDTP4 | Communication and Personality Development | Non-Credit | 100 | 100 | 40 | - | - | - | - | - | • Basic communication skills  
• Personality grooming |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| CDTP5 | PageMaker | Non-Credit | 100 | 70 | 28 | 30 | 12 | - | - | - | • Understand features & working with PageMaker. |
| CDTP6 | Photoshop | Non-Credit | 100 | 70 | 28 | 30 | 12 | - | - | - | • Familiarity with working of Photoshop  
• Understanding of digital image basics  
• Understand working with layers, masks & selection tools |

**Note:** For a PASS - A Student would require to secure 40% for both Theory and Practical.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>600</td>
<td>240</td>
</tr>
</tbody>
</table>
Detailed Syllabus

CDTP 1 - FUNDAMENTALS OF COMPUTERS & 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.


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-brokering, Production planning and Control, Purchasing, Banking, Credit and Collection, Warehousing. Use of computers in common public services and e-governance. Various e-governance initiatives in India.
CDTP2-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.

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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.

CDTP 3-Operating System (DOS, Windows) and MS-Office (Word, Excel, PowerPoint)

Disk Operating System (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.


Using Windows Accessories programs- Calculator, Notepad, Paint, WordPad, Character map, Paint, Command line.
Using Media Player, Sound Recorder, Volume Control. 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 password etc. Accessibility Features of Windows.-Sharing Information between Programs, sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers - Understanding OLE - Embed/Link Using Cut and Paste and Embed/Link Using Insert Object - Manage Embedded/Linked Object.

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.

CDTP4-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,  


CDTP 5-Pagemaker  
Drawing Text Box, Writing Text, Insert Pages, 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, using 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.  

CDTP 6-Photoshop  
Adobe Photoshop : introduction , features, starting Photoshop, interface details, open an image, navigation and viewing modes, Rules and guides, saving image, close Photoshop.  
Digital Image basics - Introduction, file size, modes and channels, bit depth, Hue, Saturation and Brightness, colors and light, file formats, resolution, calculate file size, re-sampling, RGB and CMYK model, printer setting, preview images, convert to grayscale. printing document.  
Layers : introduction, layer types, channels, adjustment layers, layer mask, working with layers and masks, layer blends, sample blend, advanced bending techniques using selection tools, modify your selection, saving and loading selections, feather and anti alias, defringe and matting, Using Magic wand, quick mask, color range, channel masking, extract filter controlling tones, retouching images, using special effects - Layer comps, Gradient maps, cast shadow, posterization, cross process effect, digital diffusion.  
Image slicing for Web. Save file as PDF.  

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# Counseling and Study Structure

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Hours of Study</th>
<th>Counseling and Study Structure (hours)</th>
<th>Face to Face Counseling</th>
<th>Self study</th>
<th>Practical</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CDTP 1</td>
<td>Fundamentals of Computer and Information Technology</td>
<td>Non-Credit</td>
<td>60</td>
<td>8</td>
<td>52</td>
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<tr>
<td>2</td>
<td>CDTP 2</td>
<td>Safety Practices in the Work Environment</td>
<td>Non-Credit</td>
<td>30</td>
<td>4</td>
<td>17</td>
<td>9</td>
<td>-</td>
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<tr>
<td>3</td>
<td>CDTP 3</td>
<td>Operating System (DOS, Windows) &amp; MS Office (Word, Excel, PowerPoint)</td>
<td>Non-Credit</td>
<td>60</td>
<td>8</td>
<td>34</td>
<td>18</td>
<td>-</td>
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<td>4</td>
<td>CDTP 4</td>
<td>Communication and Personality Development</td>
<td>Non-Credit</td>
<td>30</td>
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<td>Page Maker</td>
<td>Non-Credit</td>
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<td>34</td>
<td>18</td>
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<td></td>
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<tr>
<td>6</td>
<td>CDTP 6</td>
<td>Photoshop</td>
<td>Non-Credit</td>
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<td>8</td>
<td>34</td>
<td>18</td>
<td>-</td>
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</table>

# Study Modules & Books Information

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Course Code</th>
<th>Subject Name</th>
<th>Modules to be used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CDTP 1</td>
<td>Fundamentals of Computer and Information Technology</td>
<td>S 01 : Fundamentals of Computers and Information Technology</td>
</tr>
<tr>
<td>3</td>
<td>CDTP 3</td>
<td>Operating System (DOS, Windows) &amp; MS Office (Word, Excel, PowerPoint)</td>
<td>i) S 02 : Disk Operating System ii) MS Office (S 18 / S 19 / S 20 / S 25 : Windows / Word / Excel / PowerPoint)</td>
</tr>
<tr>
<td>4</td>
<td>CDTP 4</td>
<td>Communication and Personality Development</td>
<td>S68: Effective Communication &amp; Personality Development</td>
</tr>
<tr>
<td>5</td>
<td>CDTP 5</td>
<td>Page Maker</td>
<td>S 09 : DTP and PageMaker</td>
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<tr>
<td>6</td>
<td>CDTP 6</td>
<td>Photoshop</td>
<td>V 24 : Photoshop</td>
</tr>
</tbody>
</table>
PROGRAMME-GUIDE

CERTIFICATE IN PERSONALITY DEVELOPMENT (CPD)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Certificate in Personality Development (CPD)

(A) Duration : 01 Month  
(D) Courses : 04

(B) Eligibility : 10th Pass  
(E) Credit : Non-Credit

(C) Contents and Scheme of Examination

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Marks</th>
<th>Theory</th>
<th>Practical Marks</th>
<th>Assignments</th>
<th>Key Learning Outcomes</th>
</tr>
</thead>
</table>
| CPD1        | Characteristics of Successful Personality and Good Habits | Non-Credit | 100 | 100 | 40 | - | - | • Understand the good behavioral habits of a successful person  
|             |                     |        |             |        |                 |             | • Understand qualities of a successful person |
| CPD2        | Safety Practices in the Work Environment | Non-Credit | 100 | 70 | 28 | 30 | 12 | • Familiarity with safety, first aid, food safety, primary health and basic hygiene |
| CPD3        | Basic Principles of Success | Non-Credit | 100 | 100 | 40 | - | - | • Ability to define success  
|             |                     |        |             |        |                 |             | • Understand basic principles of success |
| CPD4        | Communication and Personality Development | Non-Credit | 100 | 100 | 40 | - | - | • Basic communication skills  
|             |                     |        |             |        |                 |             | • Personality grooming |

Note: For a PASS - A Student would require to secure 40% for both Theory and Practical.

<table>
<thead>
<tr>
<th>Grand Total</th>
<th>Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>160</td>
</tr>
</tbody>
</table>
Detailed Syllabus

**CPD 1 - CHARACTERISTICS OF SUCCESSFUL PERSONALITY AND GOOD HABITS**

Content Knowledge, Organizing Presentation, Maturity, Relevance, Audience Awareness, Time Management, Sound Management, Body Language, Smile, Self Confidence, Overall Performance.


**CPD 2 - 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.

**CPD 3 - BASIC PRINCIPLES OF SUCCESS**

Proper Use of One’s Capacity, Selection of Appropriate Words and Language, Role of Discipline, Self-Preparedness, Keep on Trying, Good Presentation, Fear Leading to Success, Self-Acquaintance, Increased Thinking Ability, Dream for Success, Respect to Leadership.

**Grammer:**

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

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**COUNSELING AND STUDY STRUCTURE**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Hours of Study</th>
<th>Counseling and Study Structure (hours)</th>
<th>Self study</th>
<th>Practicals</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>1</td>
<td>CPD 1</td>
<td>Characteristics of Successful Personality and Good Habits</td>
<td>Non-Credit</td>
<td>60</td>
<td>Face to Face Counseling: 8, Self study: 52</td>
<td>-</td>
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<td>2</td>
<td>CPD 2</td>
<td>Safety Practices in the Work Environment</td>
<td>Non-Credit</td>
<td>30</td>
<td>Face to Face Counseling: 4, Self study: 17, Practicals: 9</td>
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<td>3</td>
<td>CPD 3</td>
<td>Basic Principles of Success</td>
<td>Non-Credit</td>
<td>60</td>
<td>Face to Face Counseling: 8, Self study: 52</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td>4</td>
<td>CPD 4</td>
<td>Communication and Personality Development</td>
<td>Non-Credit</td>
<td>30</td>
<td>Face to Face Counseling: 4, Self study: 26</td>
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</table>

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**STUDY MODULES & BOOKS INFORMATION**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Course Code</th>
<th>Subject Name</th>
<th>Modules to be used</th>
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<tbody>
<tr>
<td>1</td>
<td>CPD 1</td>
<td>Characteristics of Successful Personality and Good Habits</td>
<td>E 09 : Personality Development</td>
</tr>
<tr>
<td>3</td>
<td>CPD 3</td>
<td>Basic Principles of Success</td>
<td>E 09 : Personality Development</td>
</tr>
<tr>
<td>4</td>
<td>CPD 4</td>
<td>Communication and Personality Development</td>
<td>S68: Effective Communication &amp; Personality Development</td>
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</table>
PROGRAM-GUIDE

CERTIFICATE IN WEB DESIGNING USING PHP & MYSQL (CWDPM)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Certificate in Web Designing using PHP& MYSQL (CWDPM)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Marks</th>
<th>Theory</th>
<th>Practical Marks</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>CWDPM1</td>
<td>Introduction of Web Technology</td>
<td>Non-Credit</td>
<td>100</td>
<td>70</td>
<td>28  30</td>
<td>12 - -</td>
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<tr>
<td>CWDPM2</td>
<td>Safety Practices in the Work Environment</td>
<td>Non-Credit</td>
<td>100</td>
<td>70</td>
<td>28  30</td>
<td>12 - -</td>
</tr>
<tr>
<td>CWDPM3</td>
<td>RDBMS and MYSQL</td>
<td>Non-Credit</td>
<td>100</td>
<td>70</td>
<td>28  30</td>
<td>12 - -</td>
</tr>
</tbody>
</table>

Key Learning Outcomes:

- Understand computer network concept (topologies, layers)
- Narrate evolution of internet, WWW-history & working.
- Understand basics of web browsers, concepts of search engines and web protocols.
- Familiarity with the use of FTP.
- Understand Unix/Linux & Windows based web servers.
- Understand internet languages like: HTML.
- Familiarity with safety, first aid, food safety, primary health and basic hygiene.
- Understand RDBMS concepts & drawing E-R diagram.
- Familiarity with relational data model.
- Understand 1st, 2nd & 3rd normal forms.
- Understand concept of distributed database.
- Ability to install WAMP & LAMP servers and Linux.
- Understand data insertion & data fetching to and from the table.
- Understand query running in database.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Practical</th>
<th>Theory</th>
<th>Practical</th>
<th>Theory</th>
<th>Pass</th>
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</thead>
<tbody>
<tr>
<td>CWDPM4</td>
<td>Communication and Personality Development</td>
<td>Non</td>
<td>100</td>
<td>100</td>
<td>40</td>
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</tr>
<tr>
<td></td>
<td>कम्यूनिकेशन एवं पर्सनलिटी डेवलपमेंट</td>
<td>Credit</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CWDPM5</td>
<td>Web Designing in PHP</td>
<td>Non</td>
<td>100</td>
<td>70</td>
<td>28</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>वेब डिजाइनिंग इन पीएचपी</td>
<td>Credit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Understand row & column operation in database
- Basic communication skills
- Personality grooming
- Understand basic PHP syntax
- Ability to use conditional statements & operators
- Understand working with functions & classes
- Understand forms in PHP
- Understand output handling & debugging

Note: For a PASS - A Student would require to secure 40% for both Theory and Practical.

<table>
<thead>
<tr>
<th>Grand Total</th>
<th>Pass</th>
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</thead>
<tbody>
<tr>
<td>500</td>
<td>200</td>
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</tbody>
</table>
Detail Syllabus

CWDPM1 - INTRODUCTION OF WEB 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, silverlight, 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.


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.

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


CWDPM2 - 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.


CWDPM3–RDBMS AND MYSQL

RDBMS Concepts - Basic concepts of database; Data independence; Data models, Relational Data Model; Relational Algebra, Relational Query language – SQL; Functional dependencies; 1st, 2nd and 3rd Normal forms, Decomposition; Integrity; Security; Concurrency; Recovery; Concept of distributed databases.

Getting Started with MySQL, introduction of WAMP and LAMP Server Installing on windows, Installing on Linux, Configuring Your System, Setting the Root Password, Deleting Anonymous Accounts, Creating an Account for Basic Use, Starting and Terminating mysql, Specifying Connection Parameters by Using Option Files, Protecting Option Files, Mixing Command-Line and Option File Parameters, Setting Environment Variables, Creating and Using a Database, Creating and Selecting a Database, Creating a Table, Loading Data into a Table, Retrieving Information from a Table, Selecting All Data, Selecting Particular Rows, Selecting Particular Columns, Sorting Rows, Restricting Data, Displaying Data from Multiple Table, Aggregate Functions, Manipulating table, Indexing & Engine, Removing Duplicates with DISTINCT, Date Calculations, Working with Advanced Queries, Using Joins to Run Queries over Multiple Tables, understanding the Different Join Types Working with Null Values, Pattern Matching, Counting Rows, Using More Than one Table, Getting Information About Databases and Tables, Using Mysql in Batch Mode, Examples of Common Queries, The Maximum Value for a Column, The Row Holding the Maximum of a Certain Column, Maximum of Column per Group, The Rows Holding the Group-wise Maximum of a Certain Column, Using User-Defined Variables,

CWDPM4-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,

CWDPM5 - WEB DESIGNING IN PHP


Using the If Statement, Using the else and elseif Statement, Using the switch / case Statement, Using the ? Operator, Comparing for Equality or Identity, Using Looping, while, do ... while, for, break and continue, exit Statement, Working with Some Advance Program Flow Statement, Using require(), include(), requireonce(), includeonce() Statement.


Working with Strings, Formatting Strings, Introducing printf(), Padding Output with the Padding Specifiers, Specifying a Field Width, Specifying Precision, Storing a Formatted String, Investigating Strings, A Note About Indexing Strings, Finding the Length of a String, Finding a Substring Within a String, Finding the Position of a Substring, Extracting Part of a String, Manipulating Strings, Cleaning Up a String, Replacing a Portion of a String, Replacing Substrings, Converting Case, Wrapping Text, Breaking Strings into Arrays, Joining Arrays to Form a String, Working with Dates and Times, Getting the Date with time(), Converting a Timestamp with getdate(), Converting a Timestamp with date(), Creating Timestamps with mktime().

Introducing Cookies, Creating Cookies, Reading from Cookies, Adding Parameters to a Cookie, Deleting a Cookie, Saving Form Data Using Sessions, Session Function Overview, Working with Session Variables, Handling Databases, Working with the Database Functions, Finding Out About Errors, Adding Data to a Table, Acquiring the Value of an Automatically Incremented Field, Accessing Information, Changing Data, SQLite: A Lightweight SQL Engine, Selecting Data, Using the PEAR DB Package.


### Counseling and Study Structure

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Hours of Study</th>
<th>Counseling and Study Structure (hours)</th>
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<td>Face to Face Counseling</td>
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<td>3</td>
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<td>CWDPM 5</td>
<td>Web Designing in PHP</td>
<td>Non Credit</td>
<td>90</td>
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### Study Modules & Books Information

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Course Code</th>
<th>Subject Name</th>
<th>Modules to be used</th>
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<tr>
<td>1</td>
<td>CWDPM 1</td>
<td>Introduction to Web Technology</td>
<td>S27 : Internet</td>
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<td>S37 : HTML</td>
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<td>RDBMS AND MYSQL</td>
<td>S 66 : RDBMS &amp; PHP with MYSQL</td>
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<td>CWDPM 4</td>
<td>Communication and Personality Development</td>
<td>S68: Effective communication &amp; personality development</td>
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<tr>
<td>5</td>
<td>CWDPM 5</td>
<td>Web Designing in PHP</td>
<td>Included in S 66</td>
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</table>
PROGRAMME-GUIDE

CERTIFICATE FOR BPO & CALL CENTER (CBCC)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Certificate for BPO & Call Center (CBCC)

(A) Duration : 4 Months

(B) Eligibility : 10th Pass

(C) Contents and Scheme of Examination

<table>
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<th>Credit</th>
<th>Total Marks</th>
<th>Theory Marks</th>
<th>Practical Marks</th>
<th>Assignments Marks</th>
<th>Key Learning Outcomes</th>
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<tbody>
<tr>
<td>CBCC1</td>
<td>Fundamentals of Computers &amp; Information Technology</td>
<td>None</td>
<td>100</td>
<td>40</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
<td>Min</td>
<td>Understand functions and components of a computer system, storage devices &amp; their physical structure &amp; working.</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Understand operating system &amp; file system</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Understand &amp; use computer networks</td>
</tr>
<tr>
<td>CBCC2</td>
<td>Safety Practices in the Work Environment</td>
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<td>100</td>
<td>70</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
<td>Min</td>
<td>Familiarity with safety, first aid, food safety, primary health and basic hygiene</td>
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<tr>
<td>CBCC3</td>
<td>Operating System (Windows) &amp; MS-Office (Word, Excel, PowerPoint)</td>
<td>None</td>
<td>100</td>
<td>70</td>
<td>28</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
<td>Min</td>
<td>Understand booting process of OS &amp; file system, installation</td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Understand Windows: accessories &amp; system tools.</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>Understand advanced features of Windows &amp; Setup Network connection.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Understand creation, &amp; printing a document/presentation/ &amp; excel sheet in MS Office.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td>Ability to use advanced features in MS Word like inserting word art, shapes, clipart, charts, smart arts, symbols, graphs etc. in a document/slide.</td>
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<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>CBCC4</td>
<td>Communication and Personality Development</td>
<td>Non Credit</td>
<td>100</td>
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<td>CBCC5</td>
<td>BPO &amp; Call Centre Process</td>
<td>Non Credit</td>
<td>100</td>
<td>70</td>
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<tr>
<td>CBCC6</td>
<td>E-mail &amp; Chatting Ethics</td>
<td>Non Credit</td>
<td>100</td>
<td>70</td>
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<td>12</td>
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<tr>
<td>CBCC7</td>
<td>Voice Accent &amp; Communication</td>
<td>Non Credit</td>
<td>100</td>
<td>70</td>
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Note: For a PASS - A Student would require to secure 40% for both Theory and Practical.

<table>
<thead>
<tr>
<th>Grand Total</th>
<th>Pass</th>
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<tbody>
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<td>700</td>
<td>280</td>
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</table>
Detailed Syllabus

CBCC1 - 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.


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 services and e-governance. Various e-governance initiatives in India.

**CBCC2 - 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.

**CBCC3 - OPERATING SYSTEM & MS OFFICE**

Fundamentals 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.

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

Using Media Player, Sound and Audio device settings. 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 password etc. Accessibility Features of Windows.-Sharing Information between Programs, sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers - Understanding OLE - Embed/Link Using Cut and Paste and Embed/Link Using Insert Object - Manage Embedded/Linked Object.

**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, math 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.
CBCC4-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,


CBCC5 - BPO & Call Center Process

History of the industry, Basics of the industry, Work culture in BPOs, Responsibility and hierarchy of a BPO agent, Eligibility, recruitment and training of agent, Skills set for BPO and KPO: Selling skills required in the industry, Customer handling skills, Listening skills, Handling complaints of the customers, Important terms used in the industry: Spoken English, Breathing & Relaxation, Neutralizing regional sounds.

CBCC6- E-mail & Chatting Ethics

Creating and Opening an E-mail account. Writing, reading and sending emails, Copy received, Email. The to line, The cc line, The bcc line, subject line, Signatures, copy/Print received mail. Send Email with attachment. Open/Download attachments. Common email and letter writing errors. Think twice send once, be concise, be precise.


SMS, Type of SMS: Text, Multimedia, Voice SMS, SMS Sending through internet.

CBCC7- Voice Accent & Communication

## Counseling and Study Structure

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Hours of Study</th>
<th>Counseling and Study Structure (hours)</th>
<th>Face to Face Counseling</th>
<th>Self study</th>
<th>Practical</th>
<th>Assignments</th>
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<tr>
<td>1</td>
<td>CBCC 1</td>
<td>Fundamental of Computers &amp; Information Technology</td>
<td>Non Credit</td>
<td>60 8</td>
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<td>30 4</td>
<td>17 9 -</td>
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<td>3</td>
<td>CBCC 3</td>
<td>Operating System (Windows) &amp; MS-Office (Word, Excel, PowerPoint)</td>
<td>Non Credit</td>
<td>60 8</td>
<td>34 18 -</td>
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<td>4</td>
<td>CBCC 4</td>
<td>Communication and Personality Development</td>
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### Study Modules & Books Information

<table>
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<tr>
<th>Sr. No</th>
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<th>Subject Name</th>
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<td>S01 - Fundamentals of Computers &amp; Information Technology</td>
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<td>Communication and Personality Development</td>
<td>S68: Effective Communication &amp; Personality development</td>
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<td>5</td>
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<td>BPO &amp; Call Centre Process</td>
<td>S67: Introduction of BPO &amp; Call Center</td>
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<td>E-mail &amp; Chatting Ethics</td>
<td>S67: Introduction of BPO &amp; Call Center</td>
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<tr>
<td>7</td>
<td>CBCC 7</td>
<td>Voice Accent &amp; Communication</td>
<td>S67: Introduction of BPO &amp; Call Center</td>
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</table>
PROGRAM-GUIDE

CERTIFICATE IN COMPUTERIZED FINANCIAL ACCOUNTING (CCFA)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
**Certificate in Computerized Financial Accounting (CCFA)**

कम्यूटरकृत फाइनेंशियल एकाउंटिंग में सर्टिफिकेट (CCFA)

(A) **Duration**: 03 Months  
(B) **Eligibility**: 10th Pass

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<th>Title of the Course</th>
<th>Credit</th>
<th>Total Marks</th>
<th>Theory Max</th>
<th>Theory Min</th>
<th>Practical Max</th>
<th>Practical Min</th>
<th>Assignments Max</th>
<th>Assignments Min</th>
<th>Key Learning Outcomes</th>
</tr>
</thead>
</table>
| CCFA1       | Fundamental of Computer & Information Technology | Non-Credit | 100 | 70          | 28         | -             | -             | 30                | 12                | • Understand the functions, characteristics & basic components of a computer system.  
• Know-how of various peripherals, storage devices & understand their physical structure & working.  
• Understand operating system & file system basics  
• Understand & use computer networks |
| CCFA2       | Operating System (Windows) & MS-Office (MS Word, Excel, PowerPoint) ऑपरेटिंग सिस्टम के बारे में सीखें, एमएस-एफ (एमएस वर्ड, एक्सेल, एमएस पावरपोइंट) | Non-Credit | 100 | 50          | 20         | 20            | 8             | 30                | 12                | • Understand working of O.S. (Windows)  
• Installation & fine tuning of Windows OS  
• Creation, edition, & printing a document/page/presentation/excel sheet in MS Office.  
• Inserting word art, shapes, clipart, charts, smart arts, symbols, graphs etc. in a document/slide.  
• Calculations using various formulas function in Excel. |
| CCFA3       | Safety Practices in the Work Environment कार्यस्थल पर सुरक्षा प्रावधान | Non-Credit | 100 | 50          | 20         | 20            | 8             | 30                | 12                | • Familiarity with electrical safety, fire safety, first aid, food safety, primary health and basic hygiene |
| CCFA4       | Introduction to Financial Accounting & Tally With GST फाइनेंशियल एकाउंटिंग एवं जी.एस.टी के साथ टेली से परिषद | Non-Credit | 100 | 50          | 20         | 20            | 8             | 30                | 12                | • Understand the basic concepts of accounting and Inventory Tally configuration.  
• Working with accounts books, purchase and journal registers.  
• Understand cheque printing, printing options, different printing formats, multi-account printing |
• Understand the concept of GST, Calculation of GST on different transactions.
• Generation of sales with IGST, CGST and SGST.
• Preparation of GST returns

<table>
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<th>Communication and Personality Development</th>
<th>Non-Credit</th>
<th>100</th>
<th>70</th>
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Note: For a PASS - A Student would require to secure 40% for both Theory and Practical.

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</table>
Detailed Syllabus

CCFA 1: Fundamentals of Computers & 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.


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—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 Windows

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 services and e-governance. Various e-governance initiatives in India.

CCFA 2: Operating System (Windows) & MS-Office (Word, Excel, PowerPoint)

Operating System

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, Volume Control: 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 password etc. Accessibility Features of Windows.-Sharing Information between Programs, sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers - Understanding OLE - Embed/Link Using Cut and Paste and Embed/Link Using Insert Object - Manage Embedded/Linked Object.

**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.

**CCFA3 : 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.

**CCFA 4: Introduction to Financial Accounting & Tally With GST**

Basic Concepts of Accounting, Financial Statements, Financial Statement Analysis, Cost Centre, Basic concepts of Inventory Tally Configuration & INI setup, Data Directory & Folders configuration, Single & Multiple User, Tally Screen Components, Mouse / Keyboard Conventions & Key, Combinations, Switching between screen areas, Quitting Tally. Maintaining Company Data, Basic Company Details, Create/ Alter/ Select/ Load/ Close a Company, Chart of Accounts, Company Features, Configuration.

Create, Alter & Display Groups and Ledgers, All accounting voucher types and transactions, Create and Alter new Voucher type, Item and Account Invoice transactions, Excise Invoice, Export Invoice, Transactions using Bill-wise details Create, Alter & Display Cost Centre and Cost Categories, Cost centre & Cost Category allocation in voucher entry, Creating Cost centre Class, Invoice entry in a Class situation, Create, Alter & Delete Foreign Currencies, Voucher entry using foreign currency, Bank Reconciliation, Interest calculations using simple & advance parameters, Interest calculations on outstanding balances & on invoices, Use of voucher class, adjustment of interest, Creation of voucher class, Invoice entry in a class situation.

Create, Alter & Delete Budgets for groups, ledgers & cost centres, Defining credit limit & credit period, Display Budgets & variances, Create, Alter & Delete a scenario. Enabling Job Costing in Tally, Master creation &
configuration for Job costing, Creation of Voucher type & Voucher class for Stock Transactions, Creation of Transfer journal for transfer of stock between godowns, Consumption journal Transactions, payment.


Create, Alter & Display Stock Groups and Stock Items, Stock item behaviour using costing and market valuation method, other behaviour like treating all sales as new manufacture, treating all purchases as consumed, treating all rejections inward as scrap, ignoring negative balances, Treating difference due to physical counting, Create, Alter & Display Stock categories, Create, Alter, Display simple & compound units of measures, Stock items using alternate units, Defining standard cost & selling price, Defining Rate of duty, Defining MRP, Create, Alter & Display Godowns, Allocation of items to the Godowns, All inventory voucher types and transactions, Inventory details in accounting vouchers, Defining re-order level, Transactions using tracking numbers, Use of batch-wise details in voucher, Additional cost details in vouchers, Creating Bill of material, Cost estimation, Creating Price list & defining Price levels, invoice using Price list, Zero valued entries, Transactions in case of Different actual & billed quantities. Reports like Stock summary, Inventory books like Stock item, Group summary, Stock transfers, Physical stock register, Movement analysis, Stock group & item analysis, stock category analysis, Ageing analysis, Sales order & Purchase order book, Statement of inventory related to Godowns, categories, stock query, Reorder status, Purchase & Sales order summary, Purchase & Sales bill pending, Exception reports like negative stock & ledger, overdue receivables & payables, memorandum vouchers, optional vouchers, post-dated vouchers, reversing journals.

Cheque Printing, Common printing options, Different printing formats, Multi-Account printing, Dynamic- Report specific options. Creating Group company, Use of Tally vault, Using Security control & defining different security levels, Use of Tally Audit. Back-up & Restore, Splitting company data, Export & import of Data, ODBC compliance, use of E-mail, Internet publishing, Upload, web browser & online help, Re-write data.

IDENTIFYING GST TAXABLE EVENT, Basic Accounting principles, Accounting concepts and techniques for recording transactions, Financial concepts such as calculation of interest, How different taxes will subsume under GST, Invoice and particulars there of, Accounting processes and procedures to record the details of invoice, The difference between invoice and other supported documents (like purchase order, delivery challan, etc.), IT skills and operating procedures of computers and other electronic devices, Use of computers and having working knowledge of MS Excel, MS Word, etc, Procedure for digitally updating customer’s details, Applicability of GST, Concept of GST, Applicability of SGST, CGST and IGST, Concept of supply, Differentiate between taxable and non-taxable supply, Incidence of Taxation, Definition of the taxable event with respect to supply of goods, Identification of the place of supply so as to decide the applicability of the tax, Definition of what is meant by location of supplier of goods.

MAINTAINING GST RECORDS AND FILING GST RETURNS, Registration under GST, Registration process for single or separate business, Details to be furnished during the registration, Difference between taxable person versus registered person, Benefits of registration, Independent registration of assessee under GST, Calculation of Tax Liability, Instances for eligibility of Input Credit, Identification of set-offs under GST wherever applicable, Detailed identification of carry over credit, capital goods credit, embedded credits etc., Differentiate between consideration and valuation, Maintenance of Books and Records and Filing of Returns, Maintenance of different types of ledgers, Preparation of different types of periodic returns to be filed, Filing returns online, Payment Under GST, Listing different types of payment, due date, modes of payment with rules and collection of tax, penalties etc., Difference between TDS and TCS, Calculation of amount of tax payable, Making the online payment
CCFA 5 : Communication and Personality Development

- **Basic Grammar for Effective Communication : Parts of Speech** – Revision (sentence, phrase, clause, parts of speech), Noun, Pronoun, Adjective, Article, Verb, Active & Passive Voice, Infinitive, Gerund, Preposition, Conjunctions, Interjection; **Analysis, Transformation, Synthesis and Direct & Indirect Speech** – The phrase, the clause, the sentence, Analysis of compound and complex sentences, Transformation of sentences, Synthesis of sentences, Direct and indirect speech; Composition and Comprehension – Picture composition, How to write short a short story, Letter writing; **Situational communication**

- **Personality Development** : Communication skills, Body language, Positive attitude, Etiquette and manners, SWOT analysis, Decision making, Goal setting, Positive thinking, Self confidence, Motivation, Time management, Anger management, Stress management, Leadership, Team building,

### Counseling and Study Structure

<table>
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<tr>
<th>Sr. No.</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
<th>Total Hours of Study</th>
<th>Counseling and Study Structure (hours)</th>
<th>Face to Face Counseling</th>
<th>Self Study</th>
<th>Practica ls</th>
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### Study Modules & Books Information

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<th>Modules to be used</th>
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PROGRAM-GUIDE

CERTIFICATE IN GOODS AND SERVICES TAX (CGST)

- Scheme of Examination
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules & Books Information
Certificate in Goods and Services Tax (CGST)

(A) Duration : 01 Month  (D) Courses : 03

(B) Eligibility : Graduate  (E) Credit : Non-Credit

(C) Contents and Scheme of Examination

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title of the Course</th>
<th>Credit</th>
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<th>Theory</th>
<th>Practical Marks</th>
<th>Assignments</th>
<th>Key Learning Outcomes</th>
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| CGST 1      | Identifying GST Taxable Event | Non-Credit | 100 | 70   | 28  | 30 | 12 | -  | - | • Explain basic accounting principles  
|             |                     |        |             | Max | Min | Max | Min | Max | Min | • Underline accounting concepts and techniques for recording transactions  
|             |                     |        |             |     |     |     |     |     |     | • Explain financial concepts such as calculation of interest  
|             |                     |        |             |     |     |     |     |     |     | • Recognise the applicability of SGST, CGST and IGST  
|             |                     |        |             |     |     |     |     |     |     | • Define the concept of supply.  
|             |                     |        |             |     |     |     |     |     |     | • Differentiate between taxable and non-taxable supply  
|             |                     |        |             |     |     |     |     |     |     | • Define the taxable event with respect to supply of goods  
|             |                     |        |             |     |     |     |     |     |     | • Identify the place of supply so as to decide the applicability of the tax  
|             |                     |        |             |     |     |     |     |     |     | • Define what is meant by location of supplier of goods  
| CGST 2      | Maintaining GST Records and Filing GST Returns | Non-Credit | 100 | 70   | 28  | 30 | 12 | -  | - | • List down the registration process for single or separate business and understand the benefits of registration  
|             |                     |        |             | Max | Min | Max | Min | Max | Min | • Differentiate between taxable person versus
<table>
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<tr>
<th>CGST 3</th>
<th>Communication and Professional Skills</th>
<th>Non-credit</th>
<th>100</th>
<th>100</th>
<th>40</th>
<th>-</th>
<th>-</th>
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</table>

- Note down the details to be furnished during the registration
- Register an assessee under GST independently
- Identify Instances for eligibility of Input Credit
- Identify set-offs under GST wherever applicable
- Identify in detail carry over credit, capital goods credit, embedded credits etc.
- Differentiate between consideration and valuation
- Maintain the different types of ledgers
- Prepare different types of periodic returns to be filed
- File returns online.
- List the different type of payment, due date, modes of payment with rules and collection of tax, penalties etc.
- Differentiate on TDS versus TCS, calculate the amount of tax payable and make the payment online
- Reading skills to read about various accounting procedures and updates, read mails and information related to various types of documents and read forms and policy directives
- Writing skills to maintain records of work assigned as per company’s policy, update information, send and reply to mails and prepare MIS reports as per company’s accounting policy
- Oral communication skills to communicate
and share knowledge with peers and supervisors, inform about any work-flow concerns, seek required information from employee, management, suppliers, regulator etc. and handle auditor’s queries

- Distinguish between what entry/ amount is taxable and what is not
- Determine taxes as per updated norms
- Prioritize and execute tasks such that the work-flow is not disrupted
- Organize work and time in order to maximize overall productivity
- Ensure that tax deducted is correct
- Inform about any errors or refunds to be sought and extra taxes to be paid as well as about tax savings scheme
- Resolve tax related issues and concerns
- Avoid work-flow concerns, escalate problems beyond control
- Analyse tax norms and accounting information
- Prepare useful reports for management and regulator as per company’s policy
- Improve work so that there are zero errors
- Avoid any penalties to firm because of poor or inadequate reporting

Note: For a PASS - A Student would require to secure 40% for both Theory and Practical.

<table>
<thead>
<tr>
<th>Grand Total</th>
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<tbody>
<tr>
<td>300</td>
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Detail Syllabus

CGST 1: IDENTIFYING GST TAXABLE EVENT

Basic Technical Knowledge
- Basic Accounting principles
- Accounting concepts and techniques for recording transactions
- Financial concepts such as calculation of interest
- How different taxes will subsume under GST
- Invoice and particulars thereof
- Accounting processes and procedures to record the details of invoice
- The difference between invoice and other supported documents (like purchase order, delivery challan, etc.)
- IT skills and operating procedures of computers and other electronic devices
- Use of computers and having working knowledge of MS Excel, MS Word, etc
- Procedure for digitally updating customer’s details

Applicability of GST
- Concept of GST
- Applicability of SGST, CGST and IGST
- Concept of supply
- Differentiate between taxable and non-taxable supply

Incidence of Taxation
- Definition of the taxable event with respect to supply of goods
- Identification of the place of supply so as to decide the applicability of the tax
- Definition of what is meant by location of supplier of goods.

CGST 2: MAINTAINING GST RECORDS AND FILING GST RETURNS

Registration under GST
- Registration process for single or separate business
- Details to be furnished during the registration
- Difference between taxable person versus registered person
- Benefits of registration
- Independent registration of assesse under GST

Calculation of Tax Liability
- Instances for eligibility of Input Credit
- Identification of set-offs under GST wherever applicable
- Detailed identification of carry over credit, capital goods credit, embedded credits etc.
- Differentiate between consideration and valuation
Maintenance of Books and Records and Filing of Returns

- Maintenance of different types of ledgers
- Preparation of different types of periodic returns to be filed
- Filing returns online

Payment Under GST

- Listing different types of payment, due date, modes of payment with rules and collection of tax, penalties etc.
- Difference between TDS and TCS
- Calculation of amount of tax payable
- Making the online payment

CGST 3: COMMUNICATION AND PROFESSIONAL SKILLS

Organizational Context

- Company’s reporting structure
- Individual’s role in process flow
- Company’s policies, standard operating procedures and governance structure
- Action taken in case of breach of defined procedures/work instructions
- Company’s personnel management and incentive rules
- Clients and suppliers of the company
- The products/services the company deals in
- Different accounting system/procedure/processes that are followed by the company
- Organizational guidelines for dealing with different types of receipts and payments
- Company’s policies regarding the mode of receipts
- Processes and methods of collections and payments to different customers/suppliers

Reading Skills

- Various accounting procedures and updates
- Mails and information related to various types of documents
- Forms and policy directives

Writing Skills

- Maintaining records of work assigned as per company’s policy
- Updating information
- Sending and replying to mails
- Preparing MIS reports as per company’s accounting policy

Listening and Speaking Skills

- Communicate and share knowledge with peers and supervisors
- Inform about any work-flow concerns
• Seek required information from employee, management, suppliers. Regulator, etc.
• Handle auditor’s queries

**Professional Skills**

**Decision making**
• Distinguish between what entry/ amount is taxable and what is not
• Determine taxes as per updated norms

**Plan and organize**
• Prioritize and execute tasks such that the work-flow is not disrupted
• Organize work and time in order to maximize overall productivity

**Customer centricity**
• Ensure that tax deducted is correct
• Inform about any errors or refunds to be sought and extra taxes to be paid
• Inform about tax saving schemes

**Problem solving**
• Resolve tax related issues and concerns
• Avoid work-flow concerns
• Escalate problems beyond control

**Analytical thinking**
• Analyse tax norms and accounting information
• Prepare useful reports for management and regulator as per company’s policy

**Critical thinking**
• Improve work so that there are zero errors
• Avoid any penalties to firm because of poor or inadequate reporting
## Counseling and Study Structure

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## Study Modules & Books Information

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