Syllabus of

Diploma in Computer Applications

(KHAGARIJAN COLLEGE ,NAGAON)

Programme Structure:

The DCA programme is a Six Mounth course.

Eligibility : The candidate must have passed Higher Secondary or equivalent levelexamination from Science/Commerce/Arts Stream.

Number of hours/day -2 hours
Number of days/week -3 days

Sl No.	Name of the Subject	Marks(%)		
		Theory	Practical	Assignment
1	ICT Hardware	50	30	20
2	Programming in C	50	30	20
3	Overview of Operating System (DOS, Windows, UNIX / Linux and Shell Programming)	30	50	20
4	Introduction to Office Automation	50	30	20

ICT Hardware

Unit – I Introduction to Computer:

• History of development of computers
• Computer system concepts
• Characteristics
• Capabilities and limitations
• Generations of computers.
• Basic components of a computer system – Control Unit, ALU, I/O Devices, memory –
RAM, ROM,EPROM, PROM, Flash Memory and other types of memory.

Unit – II Storage Devices:

• Storage fundamentals – Primary Vs Secondary
• Data Storage and Retrieval methods – Sequential, Direct and Index Sequential.
Various Storage Devices – Magnetic Tape, Magnetic Disks, Cartridge Tape, Data Drives, Hard Disk
Drives, Floppy (Winchester Disk), Disks, Optical Disks, CD, VCD, CD-R, CD-RW, ZipDrive, DVD,
SVCD.

Unit – III Computer Software

• Types of Software – System software, Application software, Utility Software,
Demoware, Shareware,Freeware, Frimware, Free Software
• Operating Systems – Functions, Types – Batch Processing, Single User, Multi User,
Multi-programming, Multi-Tasking.
• Programming languages – Machine, Assembly, High Level, 4 GL.
• Data representation in computers.
• Number System of computers – Binary, Octal, Hexa Decimal – Representation &
their conversion.
• Coding System – ASCII, BCD, and EBCDIC etc.
• Computer Virus

BOOKS RECOMMENDED :

1. Vikas Gupta; Comdex' Hardware and Networking Course Kit; DreamTech press.

2. Sinha, P.K.(2007). Computer Fundamentals. New Delhi: BPB Publications.

Programming in C

Unit – I C Language : Introduction
• Introduction
• C Character Set , Constants, Variables and Key words

Unit – II Decision and Control Structure
• if ,if-elses, forms of if-elses statement
• Operator
• Types of Loops
• Case and Switch

Unit –III Arrays and Functions
• Arrays
• C Functions – Call by values and Call by reference

Practical on C Programming:
Each candidate will present a small program with the help of C Programming. Evaluation will be done on the basis of written program, Practical presentation on Computer and Viva.

BOOKS RECOMMENDED:

1. Balaguruswami, E. (2008). Programming with C. New Delhi : Tata McGraw Hill.
2. Kernighan,Brian W. & Ritchie, Dennis M. (1988). The C Programming Language ANSI C.Prentice Hall PTR.

Overview of Operating System

What is operating system? Types of operating system, (Batch, multiprogramming, timesharing, real time system) Functions of OS, Operating system as resource manager.

Disk operating system : main files, DOS Commands-Internal Commands & External Commands. Batch files.Config.sys and Autoexec.bat file.

Windows OS-An overview of different versions of windows, Basic windows elements. File management through windows. Widows accessories, windows Explorer, Entertainment system tools, Understanding OLE.

Linux OS : Introduction to Linux, Files and directories, architecture(kernel, shells, utilities) and various Linux commands. File manipulations, redirection and filters , editors(vi, ed etc.) Concept of process, System administration: File system, system administration commands.

BOOKS RECOMMENDED :

3. Rajiv Mathur; Learning Windows 98 Step-By-Step; BPB Publication.

4. Crawford; Window 98 - No Experience Required; BPB Publications.

5. Sumitabha Das; UNIX concepts & applications; Tata McGraw Hill, New Delhi; (fourth Edition).

6. A.S. Tanenbaum; Modern Operating Systems; Pren tice Hall of India, New Delhi, 1995; (Third Edition).

Introduction to Office Automation

Word Processing: MS Word:
• Introduction to Word Processing
• Introduction to MS Word: features, Creating, Saving and Opening documents in Word, Interface, Toolbars, Ruler, Menus, Keyboard Shortcut.
• Editing a Document – Moving, Scrolling in a document, Opening Multi document windows, EditingText – Selecting, Inserting, deleting, moving text.
• Previewing documents, Printing documents – Print a document from the standard toolbar, Print adocument from the menu, shrinking a document to fit a page, Reduce th e number of pages by one.
• Formatting Documents: Paragraph formats, Aligning Text and Paragraph, Borders and Shading, Headers
and Footers, Multiple Columns.

Worksheet: MS Excel:
• Worksheet basics
• Creating worksheet, entering data into worksheet, heading information, data, text, dates, Cell formatting values, saving & protecting worksheet.
• Opening and moving around in an existing worksheet
• Toolbars and Menus, keyboard shortcuts
• Working with single and multiple workbook – coping, renaming, moving, adding and deleting, coping entries and moving between workbook s
• Working with formulas & cell referencing .
- Autosum
- Coping formulas
- Absolute & Relative addressin g
• Working with ranges – creating, editing and selecting ranges, sorting.
• Formatting of worksheet – Auto format, changing – alignment, character styles, column width, dateformat, borders &colours, currency signs.
• Previewing & Printing workshee t – Page setting, Print titles, Adjusting margins, Page break, headers and
footers.
• Graphs and charts – using wizards, various charts type, formatting grid lines & legends, previewing & printing charts.

Presentation Graphics: MS Power Point:
• Features and various version s
• Creating presentation using Slide master and template in various colour scheme
• Working with different views and menus of power poin t
• Working with slides – Make new slide, move, copy, delete, duplicate, lay outing of slide, zoom in or ou t of a slide.
• Editing and formatting text: Alignment, editing, inserting, deleting, selecting, formatting of text, find and replace text.
• Bullets, footer, paragraph formatting, spell checking .
• Printing presentation – Print slides, notes, handouts and outlines.
• Inserting Objects – Drawing and inserting objects using Clip Art's pictures and charts.
• Custom Animation – slide transition effects and other animation effects.
• Presenting the sho w – making stand alone presentation

BOOKS RECOMMENDED :

1. Mansoor, A. I.T. Tools and Applications. Matura : Pragya Publications.
2. Dubey, Manoj (2013). P C Packages. Indore : Kamal Prakashan