Basic of Computer & Information Technology Lab.

Subject Code **00206**	Practical			No of Period in one session : 60		
	No. of Periods Per Week			Full Marks	:	
	L	T	P/S	Annual Exam.	:	
	—	—	06	Internal Exam.	:	

RATIONALE

Today computers are no longer specified tools for some but now they are fact of life and have great influence on all aspect of life. Computerised work environment is an essential requirement. In order to increase employability of diploma holders, it is essential to train them to various aspects of Computer & information technology such as understanding the concept of Computer & information technology and its scope; operating a computer; use of various tools of MS office; using internet etc. This will enable the students to enter their professions with confidence, live in a harmonious way and contribute to the productivity.

Objectives:

Students will be able to:
1.   Understand a computer system that has hardware and software components, which controls and makes them useful.
2.   Understand the operating system as the interface to the computer system.
3.   Use the basic functions of an operating system.
4.   Set the parameter required for effective use of hardware combined with and application software.
5.   Compare major OS like Linux and MS-Windows
6.   Use file mangers, word processors, spreadsheets, presentation software's and Internet.
7.   Have hands on experience on operating system and different application software
8.   Use the Internet to send mail and surf the World Wide Web.

TOPICS TO BE EXPLAINED THROUGH DEMONSTRATION

1.   Information Technology – its concept and scope
2.   Computers for information storage, information seeking, information processing and information transmission
3.   Elements of computer system, computer hardware and software; data – numeric data, alpha numeric data; contents of a program, processing
4.   Computer organization, block diagram of a computer, CPU, memory
5.   Input devices; keyboard, mouse etc; output devices; VDU and Printer, Scanner, Plotter
6.   Electrical requirements, inter-connections between units, connectors and cables
7.   Secondary storage; magnetic disks – tracks and sectors, optical disk (CD and DVD Memory), primary and secondary memory: RAM, ROM, PROM etc., Capacity; device controllers, serial port, parallel port, system bus
8.   Exercises on file opening and closing; memory management; device management and input – output (I/O) management with respect of windows
9.   Installation concept and precautions to be observed while installing the system and software
10.   Introduction about Operating Systems such as MS-DOS and Windows
11.   Special features, various commands of MS word and MS-Excel
12.   About the internet – server types, connectivity (TCP/IP, shell); applications of internet like: e-mail and browsing
13.   Various Browsers like WWW (World wide web); hyperlinks; HTTP (Hyper Text Transfer Protocol); FTP (File Transfer Protocol)
14.   Basics of Networking – LAN, WAN, Topologies

LIST OF PRACTICALS
1.   Given a PC, name its various components and list their functions
2.   Identification of various parts of a computer and peripherals
3.   Practice in installing a computer system by giving connection and loading the system software and application software
4.   Installation of DOS and simple exercises on TYPE, REN, DEL, CD, MD, COPY, TREE, BACKUP commands
5.   Exercises on entering text and data (Typing Practice)
6.   Installation of Windows 98 or 2000 or XP or Vista etc.
   (1)   Features of Windows as an operating system
      -           Start
      -           Shutdown and restore
      -           Creating and operating on the icons
      -           Opening closing and sizing the windows
      -           Using elementary job commands like – creating, saving, modifying, renaming, finding and deleting a file
      -           Creating and operating on a folder
      -           Changing setting like, date, time color (back ground and fore ground)
      -           Using short cuts
      -           Using on line help
7.   **MS-WORD**
      -           File Management:
                  Opening, creating and saving a document, locating files, copying contents in some different file(s), protecting files, Giving password protection for a file
      -           Page Set up:
                  Setting margins, tab setting, ruler, indenting
      -           Editing a document:
                  Entering text, Cut, copy, paste using tool- bars
      -           Formatting a document:
                  Using different fonts, changing font size and colour, changing the appearance through bold/ italic/ underlined, highlighting a text, changing case, using subscript and superscript, using different underline methods
      -           Aligning of text in a document, justification of document ,Inserting bullets and numbering
      -           Formatting paragraph, inserting page breaks and column breaks
      -           Use of headers, footers: Inserting footnote, end note, use of comments
      -           Inserting date, time, special symbols, importing graphic images, drawing tools
      -           Tables and Borders:
                  Creating a table, formatting cells, use of different border styles, shading in tables, merging of cells, partition of cells, inserting and deleting a row in a table
      -           Print preview, zoom, page set up, printing options
      -           Using Find, Replace options

		-	Using Tools like:

- Using Tools like:
  Spell checker, help, use of macros, mail merge, thesaurus word content and statistics, printing envelops and labels
- Using shapes and drawing toolbar,
- Working with more than one window in MS Word,
- How to change the version of the document from one window OS to another
- Conversion between different text editors, software and MS word

8.   MS-EXCEL
- Starting excel, open worksheet, enter, edit, data, formulas to calculate values, format data, create chart, printing chart, save worksheet, switching from another spread sheet
- Menu commands:
  create, format charts, organise, manage data, solving problem by analyzing data, exchange with other applications. Programming with MS-Excel, getting information while working
- Work books:
  Managing workbooks (create, open, close, save), working in work books, selecting the cells, choosing commands, data entry techniques, formula creation and links, controlling calculations, working with arrays
- Editing a worksheet, copying, moving cells, pasting, inserting, deletion cells, rows, columns, find and replace text, numbers of cells, formatting worksheet
- Creating a chart:
  Working with chart types, changing data in chart, formatting a chart, use chart to analyze data
- Using a list to organize data, sorting and filtering data in list
- Retrieve data with MS – query: Create a pivot table, customising a pivot table. Statistical analysis of data
- Customise MS-Excel:
  How to change view of worksheet, outlining a worksheet, customize workspace, using templates to create default workbooks, protecting work book
- Exchange data with other application: linking and embedding, embedding objects, linking to other applications, import, export document.

9.   MS POWER POINT
- a)   Introduction to start PowerPoint
  - How to start PowerPoint
  - Working environment: concept of toolbars, slide layout, templates etc.
  - Opening a new/existing presentation
  - Different views for viewing slides in a presentation: normal, slide sorter etc.
- b)   Addition, deletion and saving of slides
- c)   Insertion of multimedia elements
  - Adding test boxes
  - Adding/importing pictures
  - Adding movies and sound
  - Adding tables and charts etc.
  - Adding organizational chart
- d)   Formatting slides
  - Using slide master
  - Text formatting
  - Changing slide layout
  - Changing slide colour scheme
  - Changing background
  - Applying design template
- e)   How to view the slide show?
  - Viewing the presentation using slide navigator
  - Slide transition
  - Animation effects etc.

10.   Internet and its Applications
- a)   Log-in to internet
- b)   Navigation for information seeking on internet
- c)   Browsing and down loading of information from internet
- d)   Sending and receiving e-mail
  - Creating a message
  - Creating an address book
  - Attaching a file with e-mail message
  - Receiving a message
  - Deleting a message

RECOMMENDED BOOKS

1.   Fundamentals of Computer by V Rajaraman; Prentice Hall of India Pvt. Ltd., New Delhi
2.   Computers Today, by SK Basandara, Galgotia publication Pvt ltd. Daryaganj, New Delhi
3.   MS-Office 2003/2007 for Everyone by Sanjay Saxena; Vikas Publishing House Pvt. Ltd., New Delhi
4.   Internet for Every One by Alexis Leon and Mathews Leon; Vikas Publishing House Pvt. Ltd., Jungpura, New Delhi
5.   A First Course in Computer by Sanjay Saxena; Vikas Publishing House Pvt. Ltd., Jungpura,New Delhi
6.   Mastering Windows XP, BPB Publication, New Delhi
7.   Computer Fundamentals by PK Sinha; BPB Publication, New Delhi
8.   Fundamentals of Information Technology by Leon and Leon;Vikas Publishing House Pvt. Ltd., Jungpura, New Delhi
9.   On Your Marks – Net ….. Set ….. Go ….. Surviving in an e-world by Anushka Wirasinha, Prentice Hall of India Pvt. Ltd., New Delhi
10.   Fundamentals of Information Technology by Vipin Arora, Eagle Prakashan, Jalandhar