

## IT PRIMER - 2 (At a glance)

Distribution of teaching Hours: 80 Hours (40 Theory + 40 Practical)

### IT Tools

#### Learning Objectives :

##### A. General

1. To develop practical IT motivation.
2. To develop key competencies/transferable skills for enhanced performance in higher studies or work experience.
3. To develop proficiency in use of Excel, Windows, word processing, Spreadsheet, Office Management Tools, and Document presentation.
4. To develop interdisciplinary skills.
5. To develop work culture, habit of teamwork, consensus decision-making, learning to learn, life long learning.
6. To develop positive attitude towards work.

#### Instructional Methodology:

Classroom lectures, laboratory practices, projects (in-field, Internet/library search-based)

### Course Contents

#### IT: an Overview Information Storage: Record Keeping, Archiving

- Information Seeking, Querying, Searching and Browsing;
- Information Processing: Cataloguing, sorting, Indexing, and Computations
- Information Transmission: Electronic Media, Broadcasting (Radio, TV) Telecommunication, and Telephony & Fax.
- Computers for Information Storage: Seeking, Processing and Transmission.

#### Computer Systems

Elements of Computer System, Hardware and Software, Data, Numeric data, alphanumeric data, Program, Processing;

Computer Organization: Block Diagram of a computer, CPU, Memory;

Input/output devices: Keyboard, Mouse, VDU, and Printer;

Storage devices: Hard Disk, floppy Disk, CDROM, Storage Units - Bit, Byte, KB, MB, GB, Data encoding; Handling Guidelines for storage media.

Memory: Primary and Secondary Memory, RAM, ROM, Cache memory, Capacity;

CPU, Device Controllers, Serial port, Parallel Port, System Bus;

#### Applications Areas

Introduction to applications of computers in different careers and professional fields;

Office Automation: Word Processing, Accounting, Payroll, and Inventory Control;

Public Utilities: Banking, Railway and Airlines Reservation, Hospital Management, billing, tourist Information, Hotel Management, Library Management, Retail and Distribution, automatic Tele-information services;

Entertainment: Animations, films, Advertising, Games, and Video on Demand;

Education: Teaching Aids, Interactive Kiosks, and Distance education;

Miscellaneous: Printing, Architecture, Interior Design, Garments and Fashion Design, Museum.

#### Introduction to Data Processing

Signification of the subject in overall package of courses, Basic assumptions on which structure of the subject accounting is based, Kinds of Accounts and rules for recording, Business transaction based on kind of accounts and accounting equations.

## **Spread Sheet Management**

(Recommended tool:- Microsoft Excel or equivalent)

Excel Chart Feature, Creating Chart on Separate Worksheets, Editing Charts, Rotating 3-D Charts, Printing Charts, Adding Overlay Charts, Creating and Placing Graphic Objects, Positioning Graphics on Worksheets, Drawing Lines and Shapes, Possible Sources of Excel Graphics, Excel Slide Shows; Running Macros,

Database Concepts and terms, Creating Excel Database, Working with Data Forms, Sorting Excel Databases, Cross-Tabulating Databases, Filtering - a better way to find.

Introduction, Entering and Editing Formulas, order of Evaluation in Formulas, Lookup Tables, Creating Custom fill lists, Protecting and Unprotecting documents and Cells;

Formatting a Worksheet, Sorting, Inserting rows and columns, Inserting Cells, Deleting and Clearing parts of a Worksheet, How Formulas React to Worksheet Design Changes, Excel page set-up, Autoformat, Inserting and Removing page breaks, Hiding Rows and Columns, Organizing large Projects, Splitting windows and Fixing Titles, Outlining your worksheets; Working with Multiple Worksheet, Using Multiple Worksheets in a Workbook, viewing Multiple Windows;

Introduction to Function, Examples of Function by Category, Data exchange with Word Table.

## **PC Set-up**

SMPS, Voltage, current and wattage ratings, Power Conditioning devices - Stabilizer, CVT, Spike suppresser, UPS - online and offline, Earthing, Testing Electrical Connections Using Multi-meter;

Preventive maintenance against general problems including virus, General precautions, Basic System Tools, Disk Management Utility, virus Scanning and Vaccination, Cleaning of Keyboard, Mouse, Floppy drive head and CD.

Exchanging ASCII files and Binary files

BIOS, Boot record, disk partition (MBR), File Allocation Table (FAT), System files and Booting Sequence;

Configuring the system: CONFIG.SYS file and configuration commands:

Setting the environment: AUTOEXEC.BAT file, PATH and SET command.

Common Computer faults, solid and intermittent faults, Hardware and Software faults, Electronic, mechanical, Environmental and media problems.

Faults elimination process, Dead System;

Troubleshooting: Symptom Observation, Symptom Analysis, and Fault Diagnosis.

Diagnostic and utility software: SCANDISK, Virus protection software, DEFRAG PC-Tools, Norton Utility, QA-Plus;

Elementary Printer, Monitor, FDD, Keyboard, Mouse, HDD, serial port, FDC, HDC, Display adapter problems.

## **Internet**

Information Seeking on Internet: Searching basics, searching options, framing your search

Telnet: Talk, Finger, Forum, and Chat, Message Boards;

FTP: Shell, windows and Browser; Fax Mail

Usenet Newsgroup: Newsgroup hierarchies and its working Reading News, Posting to Newsgroups,

## **Multimedia Presentation**

(Recommended Tool: PowerPoint, or other low end MM authoring software)

Overview: Menu bar, status bar, Scroll bar, Toolbar, Customized toolbar, Slide view, Outline view, Slide Sorter view, Notes Pages view, Slide show view.

Creating Presentations and Slides: Opening and saving presentations,

Creating a new slide, Changing a layout for a slide, Deleting a slide, Changing the order of slides, Animation.

Working with PowerPoint Objects: Selecting, Grouping, Ungrouping and regrouping objects, Moving And aligning objects, Cutting, Copying, Pasting, Duplicating an object.

Putting Text on Slides: Putting Text, Typing text in shapes, Selecting and editing text, Finding and replacing text.

## **Data Interchange**

File format, Import & Export of data between various packages e.g. MS-Word, MS-Access, MS-Excel, PageMaker, PhotoShop, Paintbrush, Corel Draw.

Familiarization with OLE controls.

Lists, Extended fonts and text colors, adding sound and images, meta tags, FTP rights, counters, guest books, indexing, uploading, Search Engines.

## PRACTICALS

1. Operating System
  - Syntax and use of simple DOS/Windows
  - Internal and external, pipes filter and use of redirection
  - Configuration and Batch commands
  - Utilities
  - Creation of a batch file using command line parameters, loops and conditions.
  - Creation of CONFIG.SYS file for drivers like MOUSE, Disk Drive.
  - Changing windows looks like customizing
  - Background, Setting Screen Saver, Changing the Font, Changing font size.
  - Use of Multimedia
2. Application Areas
  - Use of Tally or EX: Financial Accounting Package
  - Student presentation based on visit / study / Internet Browsing
3. PC Set-up
  - Practical usage of PC trouble shooting software
  - Checking disk errors and rectification
  - Using diagnostic software
  - Software trouble shooting
  - Installation of peripheral devices
4. Spreadsheet Management
  - Creating a spreadsheet
  - Formatting cell, column, Worksheet
  - Creating, Editing and Printing Charts, Rotating 3-D Charts,
  - Using Graphics to draw lines and shapes
  - Excel Slide shows
  - Use of Macros
  - Creating and Manipulating Excel database
5. Multimedia Presentation
  - Creating Presentations and Slides
  - Working with (PowerPoint) objects
  - Putting texts on slides
6. Data Interchange between Word, Excel and PowerPoint files
7. Project Report