

Syllabus for “Training course on Computer Awareness”

Distribution of Teaching Hours: 120 (40 Theory-80 Practical)

Learning Objectives:

1. To inculcate favourable attitude towards IT.
2. To develop introductory skills of operating a computer.
3. To develop interdisciplinary skills.
4. To develop work culture and positive attitude towards work.

Instructional Methodology

Classroom lectures, laboratory practicals.

Course Contents

IT: an Overview & Computer Systems

Elements of Computer System: Hardware and Software, Data, Numeric data, Alphanumeric data, Information, Program, Processing;

Parts of computer: Block diagram of a computer, CPU, Memory, Input/Output devices: Keyboard, Mouse, VDU / Monitor, Printer / MFP, Scanner; UPS;

Types of computers: Desktop, Laptop, Palmtop, All-in-one;

Specifications of a computer: Processor (make, generation, etc.), RAM (size, speed), HDD (type, size), OS, warranty in years (onsite / offsite);

Types of printers: monochrome, colour, single function, multi-function (print, scan, copy) and their combinations, Difference between inkjet, ink-tank, dot-matrix and laser printers;

Difference between cartridge and toner;

Types of UPS: offline, line interactive and online

PC Set-up

Electrical requirements, Interconnections between various components of computer, various connectors including serial, parallel, RJ45, USB, HDMI, VGA, NIC, microphone, headphone, difference between male/female connectors, various cables including power cables, introduction to networking cables like Cat5 and Cat6; difference between LAN and wireless (WiFi) network;

Secondary Storage: Internal and External Hard Disk Drives, Flash Drive / Pen Drive, Optical Disks (CD / DVD / Blue Ray), Memory: RAM, ROM;

Parts of CPU and how parts are connected: Motherboard, Processor, RAM, Hard Disk, Power Supply;

Types of Software: Open-source and commercially of the shelf (COTS)

Operating Systems

Microsoft Windows latest version: Start, Shutdown and restart; Desktop, icons, files, folders, directory tree, drives; Placing and sizing of windows: Finding, Renaming files or folders; Using shortcuts; Copying a file or folder; Setting date and time; Deleting files and folders; Retrieving deleted files or folders; emptying the Recycle Bin; data backup; task manager; command prompt;

language settings; device drivers; installing / uninstalling softwares; sharing resource on network; manual proxy settings; IP settings; using on-line help;

Basics about Linux and other open source OS like Ubuntu, BOSS, etc; Advantages of using Linux based OS over Windows (cost, virus, etc);

Malwares –Types -Virus, Trojans, Adware, Spyware, etc; need of anti-virus software

Internet

World Wide Web (WWW), internet, intranet, website, hyperlinks, browsing / navigating, popular web browsers – Internet Explorer, Chrome, Firefox; bookmarking web pages; downloading and printing web pages; email (gmail and Punjab mail) – configuring email client; creating new email account; using email – creating, sending, replying, forwarding, adding attachments, sorting and searching; creating and using various folders in email; Search engine (Google search), backup of data on google drive and onedrive

Word Processing using Microsoft Word or equivalent

Opening, Creating and Saving a Document, text typing including unicode fonts (Raavi font for Punjabi typing), deleting, inserting, replacing, cutting, copying, pasting, moving, print preview, printing, undo, understanding of various ribbons, tabs and groups;

Formatting character, word, line and paragraph, Search, Spell Checker, Word count, Table of Content, Margins, Columns, borders, page breaks, Tables, Header, Footer, Special Symbols, Bullets and numbering, Drawing Tools, inserting pictures, Use of Word Wrap on/off, Hyphenation on/off, types of Justifications, Cursor movement and control: single character and multiple character cursor movement;

Formatting of text: margin setting, line spacing, page length setting and pagination tab setting. Bold, italics, underline, subscript, superscript, font setting, typing special characters. Page numbering, inserting current date and time, format painter, various search and replace options;

Shortcut keys for various tasks

Multimedia Presentation using Microsoft Power Point or equivalent

Overview: Various bars, ribbons, tabs, groups and views (Slide view, Outline 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, adding sound and video, inserting tables and pictures;

Working with (Power Point) Object: Selecting, Grouping, Ungrouping and regrouping objects moving and aligning objects, cutting, copying, pasting, duplicating an object, printing slides / handouts;

Putting text on slides: Putting Text, Typing text in shapes, finding and replacing text

Spreadsheet using Microsoft Excel or equivalent

Overview: Various bars, ribbons, tabs and groups, creating spreadsheets: Opening and saving spreadsheets, creating / deleting / re-ordering / renaming / duplicating sheets in a workbook;

Entering data, Text formatting, working with cells, inserting and deleting rows and columns, sort and filter, autosum, creating basic formulas and charts, finding and replacing text, modify & merge rows and columns, spellcheck, adding borders and colours to cells, printing workbooks, data validation

e-Governance

Digital India, Various e-Governance initiatives in Punjab

Hands on Experience (as per syllabus)

1. Operating System
2. Internet
3. Word processing
4. Multimedia Presentation
5. Spreadsheet

Division of Marks

SN	Topic	Theory marks	Practical Marks
1.	IT: an Overview & Computer Systems	15	15
2.	PC Set-up	10	10
3.	Operating Systems: Microsoft Windows latest version	15	15
4.	Internet	10	10
5.	Word Processing using Microsoft Word or equivalent	15	15
6.	Multimedia Presentation using Microsoft Power Point or equivalent	10	10
7.	Spreadsheet using Microsoft Excel or equivalent	10	10
8.	e- Governance	10	10
9.	Unicode typing test using Raavi font	5	5
	Total	100	100

Abbreviations:

S.N.	Abbreviations	Full Form
1.	CPU	Central Processing Unit
2.	VDU	Visual Display Unit
3.	MFP	Multi Functional Printer
4.	RAM	Random Access Memory
5.	HDD	Hard Disk Drive
6.	OS	Operating System
7.	USB	Universal Serial Bus
8.	HDMI	High-Definition Multimedia Interface
9.	VGA	Video Graphics Adapter
10.	NIC	Network Interface Card
11.	LAN	Local Area Network
12.	CD	Compact Disk
13.	DVD	Digital Video Disk / Digital Versatile Disk
14.	ROM	Read Only Memory
15.	COTS	Commercial Off The Shelf Software
16.	BOSS	Bharat Operating System Solutions