

STAGE-2

S-204 - INTRODUCTION TO INFORMATION TECHNOLOGY

i. Introduction:

This course is designed to focus on the theoretical and practical aspects of computer skill. The students will be provided with practical and theoretical coaching facilities to gain knowledge within the framework of the course.

ii. Objective:

To provide the essential IT knowledge related to business systems, irrespective of their work primary domain and role.

iii. Outcomes:

This course will cover both theoretical and practical aspects of IT knowledge. On completion of this course student will be able to have knowledge of following theoretical and practical topics:

(a) Theoretical Knowledge

- explain the basic knowledge of IT,
- explain the characteristics of computers and its classification,
- describe some of the major components of a computer system and explain their relationships to one other,

- explain computer system's CPU and memory,
- explain several types of input and output devices and their functions,
- describe multimedia, benefits and its applications,
- understand the difference between application software and system software,
- explain the different functions and differences of operating system,
- describe the low-level and high-level languages,
- describe the role of utility programme,
- describe different communication protocols,
- describe the local area network, wide area network and other types of network,
- describe some security issues involved with computer network usage.

(b) Practical Training

- Ability to use
 - Word processor package,
 - Spread-sheet package,
 - Presentation package,
 - Internet and E-mail.

INDICATIVE GRID

| | SYLLABUS CONTENT AREA | WEIGHTAGE |
|--------------------------------|---|------------------|
| 1. Theory (30 hours) | <ul style="list-style-type: none">- Introduction- Hardware- Software- Networks | 50% |
| 2. Practical (30 hours) | <ul style="list-style-type: none">- Microsoft Windows- Microsoft Word- Microsoft Excel- Microsoft PowerPoint- Internet- Accounting Package | 50% |
| TOTAL | | 100% |

Note: The weightage shown against each section indicates, study time required for the topics in that section. This weightage does not necessarily specify the number of marks to be allocated to that section in the examination.

CONTENTS

1. THEORY

Module: Introduction (02 hours)

Fundamental characteristics of computers, Classification of computers, Components of a computer system, Networks, Computer Security, Internet.

Module: Hardware (10 hours)

Central Processing Unit (CPU) & Memory

Control unit, Arithmetic logical unit, registers, Memory (RAM and ROM), Types of RAM (SRAM and DRAM), Cache Memory, Registers, Data-bases, Ports (Serial, Parallel and USB)

Input and Output

Keyboards, Mouse, Electronic Pens, Touch-Screens, Track-ball, Touch-pad, Digitiser, Scanners, Digital Cameras, Voice Recognition, Kinds of outputs (Softcopy and Hardcopy), Display Devices (CRT and Flat Panel), Screen clarity (Resolution, Dot pitch and Refresh rate), Video display adopters, Printers (impact and Non-impact), Plotters, computer output microfilm and microfiche.

Storage and Multimedia

Magnetic Disk Systems, Floppy Disks, Hard Disks, Optical Discs (CDs, DVDs), Magnetic Tape Systems, Online Storage, Smart Cards, Flash Memory Devices, What Is Multimedia, Advantages and Disadvantages of using Multimedia, Multimedia Applications.

Module: Software (08 hours)

Definition of software, Classification of software (Application software and System software), Definition of operating system, different type of operating systems, functions of operating systems, Processing techniques for increasing efficiency (multi-tasking, multi-threading, multi-processing, time-sharing, virtual memory and spooling), Programming languages (Low-level languages and high-level languages), Compiler, Interpreter, generation of languages, Procedural and non-procedural languages, Utility programmes (compression software, diagnostic programmes, back-up utilities and disk-defragmentation).

Module: Network & Security Issues (10 hours)

Definition of network, Topologies, Types of networks (LAN, WAN, VAN, MAN and VPN), Communication Protocols (Ethernet, Token Ring, TCP/IP and WAP), OSI models, Transmission Mediums, Transmission Direction, Transmission Mode, Network Devices (Switch, routers, and modem), Security issues (Viruses, Firewall and unauthorised access), Digital signatures, Blue tooth, Security issues (Computer viruses, unauthorised access and firewall), Biometric devices.

2. PRACTICAL

Microsoft Windows (02 hours)

The start menu, Manipulating windows, Copy Files, Moving Files, Deleting Files, Create folder, Search files, customised your desktop.

Microsoft Word (04 hours)

Editing, format, insert, view and file menu commands in word-processor, Paragraph/page/character formats. Letters, reports, standard templates, user-defined templates, Mail merge using data from spread-sheets and/or tables, formatting, borders, size of columns, rows, captions, table of contents, table of figures and index, page layout, print formatting, Linking and embedding spread-sheet, presentation and other integrated package documents, slide master, presentation package, Drawing toolbox: Shapes, lines, text boxes, aligning, distributing, grouping, flipping objects. Slide animation commands.

Inserting chart, table, picture word processor and spread-sheet.

Microsoft Excel (10 hours)

File, edit, view, insert, format menu commands: Print/page set up, custom header/footer, Absolute, relative addressing, cell labelling. Formulae, copying formulae. Use of different types of functions. Cell formatting, bordering, alignment, number. Data types, formats, conversion Tools: Sorting, filtering. Linking worksheets, pivot table, paste special Import/export of data from/to word processors, databases, text-files. Data format conversion problems charts: Bar charts, pie charts, formatting. Suitability, conditional formatting.

Microsoft PowerPoint (04 hours)

Create Slide, Edit Slide, Insert Slide, Run Slide Show, Insert Pictures, Add Animation, Slide Transitions, Formatting Slides, Add Sounds, Slide Colour Scheme, Using video clips and audio files, Enter text in your slides, Insert and resize a digital image or clip art (online, from PowerPoint), Apply a design template, Draw lines, Draw and colouring shapes, Create 3D shapes, Create Charts / tables, Add narration.

Internet (02 hours)

Accessing Internet, Intranet, Extranet, Internet Addresses, Surfing the web, Using bookmark and the history list, Searching the web, E-mail, Sending e-mails, receiving e-mails, managing e-mails, Connectivity issues, How to block spamming (Unwanted e-mails).

Accounting Packages (08 hours)

Under accounting package, a Peachtree Accounting Software will be practically taught. The accounting package through coverage of Peachtree software gives a thorough introduction to the concepts of computerised accounting. The students will learn how to post, retrieve and manage the books electronically and design reports as per managements' requirements. It gives a comprehensive coverage to the software with hands-on training. By the end of the course, students will be comfortable with the package and can meet various job requirements of the professional managers, while taking decision based on financial reporting.

Recommended Books

| CORE READINGS | | |
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| TITLE | AUTHOR | PUBLISHER |
| Computer Fundamentals (Concepts, Systems & Applications) | Pradeep K.Sinha Priti Sinha | Professional Business Publication Lahore |
| Computer, 8Edition | H.L Capron | Prentice Hall International Inc. |
| A Complete book on Information Technology | Dr. Rajesh Trehan | Cyber tech (CCT) |
| MS Office 2000 | Gini Courter, Annette Marquis | Sybex |
| ADDITIONAL READINGS | | |
| TITLE | AUTHOR | PUBLISHER |
| Network Security (Second Edition) | Chris Brenton Camreon Hunt | Sybex |
| CISA Manual | CISA | Information Systems Audit and Control Associations, Inc., 3701 Algonquin Road, Suite 1010. Rolling Meadows, Illinois, 60008 USA. |

