



INFORMATION SYSTEMS – PAPER 8

OVERALL AIM

To enable the learner understand computer hardware, software and information systems both theoretically and practically

LEARNING OUTCOMES

On completion of this course, the learner should be able to:

1. Identify and describe computer systems, information technology and ergonomics
2. Explain the relevance of computer software to business
3. Demonstrate an understanding and usage of computer networks
4. Communicate using computer facilities
5. Demonstrate an understanding of different types of information systems
6. Use a computer in business and social environment

LEVEL OF ASSESSMENT

The examination will assess students' comprehension and application of business and information systems knowledge and skills

EXAMINATIONS STRUCTURE

Paper 8 (I)

There will be a two hours and 15 minutes examination made up of sections A and B. Section A will comprise of ten multiple choice questions carrying 10 marks. Section B will comprise of four questions of 20 marks each, of which the candidate will be required to attempt any three.

Paper 8 (II)

There will be a one hour and 15 minutes practical examination of 30 marks

DETAILED SYLLABUS

PAPER 8 (I)

A. INTRODUCTION TO COMPUTER SYSTEMS, INFORMATION TECHNOLOGY AND ERGONOMICS

1. Introduction
 - (a) History of computers
 - (b) The future of computers
 - (c) Computer generations and classification
2. Computer system:
 - (a) Meaning
 - (b) Types of computers
 - (c) Types of data/ Information processing
 - (d) Caring for computers
 - (e) Data and computer security and risks
 - (f) Ergonomics (physical health and mental health)
 - (g) (Computer ethics
3. Information Technology
 - (a) Meaning
 - (b) Manual versus computerised systems
 - (c) Limitations of using computers
 - (d) Applications
 - (e) Social impact of computers and information technology

B. COMPUTER HARDWARE

1. Meaning
2. Hardware components of a computer:
 - (a) System unit and components
 - (b) Input and output devices
 - (c) Storage devices
3. Uninterrupted power supply
4. Ports and cables

C. COMPUTER SOFTWARE

1. Meaning
2. Types
 - (a) System software

- (i) Operating systems
 - (ii) Utilities
 - (iii) Device drivers
 - (iv) Programming languages
 - (b) Application software
 - (i) Off-the-shelf / general-purpose
 - (ii) Customised/bespoke
 - (iii) Advantages and disadvantages of application software
3. Software suites

D. USING THE COMPUTER

1. Understanding how to use a computer; booting the computer
2. User interface
 - (a) Types
 - (b) Windows environment
3. Desktop components:
 - (a) Quick launch toolbar
 - (b) Taskbar
 - (c) Icons
 - (d) Start button and menu
 - (e) My computer
 - (f) Task manager
 - (g) Recycle bin
4. File Management
 - (a) Files and folders; creating a new folder
 - (b) Copy/ move files from one folder to another
 - (c) Drag and drop files
 - (d) Create different file types with varying extensions
 - (e) Create shortcuts to frequently used files or applications
 - (f) Use of hard drive and other drives for file management
 - (g) Renaming/ deleting folders or files
 - (h) Using the recycle bin
 - (i) Storage options
 - (i) Internal drives
 - (ii) Flash drives
 - (iii) CDs/ DVDs
 - (j) My computer
 - (k) Save As, Save and Exit without changes

E. COMPUTER NETWORKS

1. Network Architecture
 - (a) Node, client, server, host computer
 - (b) Network operating system
 - (c) Distributed and centralised processing
2. Network Systems/ Models
 - (d) Terminal networking system
 - (e) Peer-to-peer networking system
 - (f) Client/ server networking system
 - (g) Enterprise computing
3. Network topologies /configurations
 - (h) Bus network
 - (i) Ring network
 - (j) Star network
 - (k) Hierarchical/hybrid network
 - (l) Mesh network
4. Computer Network Types
 - (a) Local Area Networks (LANs)
 - (b) Wide Area Networks (WANs); Internet, Extranet, Intranet
 - (c) Metropolitan Area Networks (MANs)
5. Using a network
 - (a) Sharing resources
 - (b) Merits and demerits of using computer networks
 - (c) Computer network security

F. DATA COMMUNICATION

1. Communications and Connectivity
 - (a) Fax machines, Email, Voice messaging systems/technologies
 - (b) Voice conferencing systems
 - (c) Shared resources
 - (d) Online services
2. Connectivity
 - (a) Modems, types of modems
 - (b) Types of connections:
 - (i) Integrated Services Digital Network (ISDN)
 - (ii) Digital Subscriber Line (DSL)
 - (iii) Cable modems
 - (iv) Satellite/air connection services

3. Communication Channels
 - (a) Telephone lines, coaxial cable
 - (b) Fiber optic cables
 - (c) Microwave
 - (d) Satellite
4. Data Transmission
 - (a) Bandwidth; types of bandwidth
 - (b) Serial and parallel transmission
 - (c) Direction of data transmission
 - (d) Protocols
 - (e) Modes of data transmission

G. USING THE INTERNET AND THE WEB

1. Introduction to the internet and the Web
 - (a) Meaning and terminologies:
 - (i) Telnet
 - (ii) File Transfer Protocol (FTP)
 - (iii) Gopher
 - (iv) The Web
 - (v) Hyperlinks
 - (vi) Host computer
 - (vii) Cyber space
 - (viii) Search engines
 - (ix) Index
 - (x) Firewalls
 - (b) Features of Internet
 - (i) Browsers
 - (ii) Uniform resource locator (URL)
 - (iii) Web portals
 - (iv) Web pages
 - (v) Web sites
 - (vi) Uploading and downloading
 - (vii) Book marking
 - (c) Applications of Internet in business
 - (d) Merits and demerits of using the internet
2. Navigating the Web
 - (a) Toolbars
 - (b) Menu options
 - (c) Scrolling
 - (d) Minimising, maximising and closing

- (e) Favorites
 - (f) Highlight
 - (g) Print
3. Electronic mail (email)
- (a) Meaning
 - (b) Basic elements
 - (c) Using the email
 - (d) Merits and demerits of email

PAPER 8 (II)

A. SPREADSHEETS (MS-EXCEL)

1. Getting Started with Excel
 - (a) Starting Excel
 - (b) Excel working environment
 - (c) Using the ribbon as the Excel user interface
 - (d) Navigating within the worksheet/ workbook
 - (e) Selecting a cell or range of cells
 - (f) Entering data
 - (g) Cutting, copying, and pasting cell values
 - (h) Copy and paste special
 - (i) Saving and opening a workbook
2. Managing Rows & Columns
 - (a) Inserting, moving and deleting cells
 - (b) Managing columns and rows
 - (c) Hiding and unhiding rows/ columns
 - (d) Formatting column widths and row heights
3. Managing Worksheets
 - (a) Formatting worksheet tabs
 - (b) Inserting and deleting worksheets
 - (c) Moving and copying worksheets
 - (d) Hiding and unhiding worksheets
4. Formatting Cells
 - (a) Number and date formatting
 - (b) Finding and replacing text
 - (c) Working with styles
5. Working with Formulas and Functions
 - (a) Entering formulas
 - (b) Arithmetic operators and order of operations
 - (c) Using auto-fill options

- (d) Using commonly used functions e.g VLookup, Sum, IF, Max and Min, Sumif, Countif, And, Or, Left, Right and Concatenate, Round, Proper, Now
- 6. Organising Worksheet and Table Data
 - (a) Creating and modifying tables
 - (b) Sorting and filtering data in tables
 - (c) Summarising information in tables
- 7. Working with Charts
 - (a) Summarising data visually using charts
 - (b) Customising chart data
 - (c) Formatting chart legend and titles
 - (d) Changing chart bodies
 - (e) Saving charts as templates
 - (f) Creating pie-charts
- 8. Managing Workbooks
 - (a) Linking worksheets
 - (b) Printing worksheets
 - (c) Setting page setup options
 - (d) Setting page breaks

B. WORD PROCESSING (MS WORD)

- 1. Familiarising with the MS Word interface
 - (a) The Quick access toolbar
 - (b) The Title bar
 - (c) The Ribbon
 - (d) The Ruler: the text area, the vertical and horizontal scroll bars
 - (e) The Status bar
 - (f) Understanding document views: minimise, maximise, close and resize buttons
 - (g) Understanding non-printing characters
 - (h) Executing commands with keyboard shortcuts
 - (i) Zoom slider
 - (j) Starting a new paragraph
 - (k) Help
- 2. Creating a Basic Document
 - (a) Creating a blank document
 - (b) Customising the word environment
 - (c) Entering text
 - (d) Saving files and exiting word

3. Editing a Document
 - (a) Navigating and selecting text in a document
 - (b) Inserting, deleting, or rearranging text
 - (c) Undoing changes
 - (d) Searching and replacing text
 - (e) Cutting and pasting
 - (f) Copying and pasting
 - (g) Using the clipboard
 - (h) Finding and replacing
 - (i) Checking spelling, grammar and word count
 - (j) Enhancing textual meaning using the thesaurus
 - (k) Customising autocorrect options
 - (l) Previewing and printing documents
4. Formatting Text and Paragraphs
 - (a) Changing font appearance
 - (b) Highlighting text
 - (c) Adding bullets and numbers
 - (d) Setting tabs to align text
 - (e) Paragraph layout
 - (f) Borders and shading
 - (g) Applying styles
 - (h) Creating lists
 - (i) Managing formatting
 - (j) Adding spaces before or after paragraphs
 - (k) Changing line spacing
 - (l) Creating first-line indents
 - (m) Indenting paragraphs
 - (n) Aligning paragraphs
 - (o) Creating hanging indent
5. Tables
 - (a) Creating
 - (b) Modifying
 - (c) Formatting
 - (d) Converting text to tables or tables to text
6. Inserting Graphic Objects
 - (a) Adding visual effects using symbols and special characters
 - (b) Inserting illustrations, clip art
7. Managing Page Appearance
 - (a) Page layout
 - (b) Borders and colours
 - (c) Watermarks

- (d) Headers and footers
- (e) Page numbering
- (f) Orientation
- (g) Page size
- (h) Margins
- (i) Page and section breaks

REFERENCES

1. Bocij Paul, Chaffey Dave, Greasley Andrew and Hickie Simon (2008), Business Information Systems: Technology, Development and Management in the E-Business, Prentice Hall. Special Edition.
2. Clifton H.D, Ince D.C & Sutcliffe (2000), Business Information Systems, Prentice Hall.6th Edition.
3. Cobham David and Curtis Graham (1998), Business Information Systems, Prentice Hall.6th Edition.