Syllabus and Scheme of Examinations

Foundation Courses

COMPUTER FUNDAMENTALS
Paper Code: 16CSAF1

Course Outcomes:

By the end of the course the students will be able to:

CO1 Develop understanding of generations of computers, its key terms, number systems and codes.

CO2 Analyze the use of Input and Output components of a PC along with memory storage devices for its working.

CO3 Demonstrate the use of User interfaces of Operating systems in use.

CO4 Organize and modify files and documents on MS-Word, Excel and Powerpoint

CO5 Utilize MS-Office for office related work.

External: 40   **Time: 3Hrs.**
Internal: 10
Note: Examiner will be required to set NINE questions in all. Question Number 1 will consist of total 8 parts (short-answer type questions) covering the entire syllabus and will carry 16 marks. In addition to the compulsory question there will be four units i.e. Unit-I to Unit-IV. Examiner will set two questions from each Unit of the syllabus and each question will carry 16 marks. Student will be required to attempt FIVE questions in all. Question Number 1 will be compulsory. In addition to compulsory question, student will have to attempt four more questions selecting one question from each Unit.

Unit-I

Historical Evolution of Computing Systems: Overview of Data Processing, History of Computing, Computer Generations; Characteristics of Computer, Anatomy of Computer, Classification of Computers.

Number Systems and Codes: Introduction, Number Systems and its types, and inter-conversion of Number Systems; ASCII and EBCDIC codes.

Input and Output Devices: Concept of Input/Output, Types of Input Devices; Output Devices – Printers, Plotters and Monitors.

Unit-II

Memory and Storage Devices: Characteristics of memory systems, memory hierarchy, Types of Memory – RAM, ROM, etc.; Magnetic Disks, Magnetic Tapes, Optical Disks; Concept of Cache Memory and Virtual Memory.

Software and Operating System Concepts: Introduction, Software Types, Language translators, System Utility Software, Application Software; Operating System – Characteristics, its functions, and its classification; User Interfaces – CUI and GUIs. DOS and Windows

operating systems.

Unit-III

Working with Office Tools:

Using Word Processing: Opening and Closing of documents, Text creation and Manipulation, Moving Around in a Document, Formatting of text, Table handling, Spell check, language setting and thesaurus, Handling Multiple Documents, Printing of word document.

Using Spreadsheet tool: Basics of Spreadsheet; Manipulation of cells, Formulas and Functions, Editing of Spread Sheet, Page setups, header and footer, printing of Spread Sheet.

Using Slide Presentation Tool: Basics of powerpoint, Preparation and Presentation of Slides, Slide Show, Formatting and Clip Arts, Taking printouts of presentation / handouts.

<center>**Unit-IV**</center>

Communication and Networks: Data Communication, Transmission Modes, Basics of

Computer networks, types of computer network - LAN, MAN, WAN; Network Topologies and Applications of Computer Networks.

Internet Basics: Concept of Internet, Application of Internet, WWW, Web-sites and URLs, Search Engine, Using Electronic mails, Instant Messaging, Web Browsing software, Surfing the Internet.

Social Concern: Positive and Negative Impacts of Computer Technology, Computer Crimes, Computer Virus: Definition, Types of viruses, Characteristics of viruses, anti-virus software.

Computer Applications: Data Analysis, Sports, Research, Education, Business, Medicines & Health Care, Weather Forecasting, Military.

Suggested Readings:

1. Nasib Singh Gill: Handbook of Computer Fundamentals, Khanna Books Publishing Co.(P) Ltd., New Delhi, 2016.
2. P.K Sinha: Computer Fundamentals, BPB Publications.
3. Nasib Singh Gill: Computing Fundamentals and Programming in C, Khanna Books Publishing Co.(P) Ltd., New Delhi.
4. V. Rajaraman: Fundamentals of Computers, PHI
5. Microsoft Office – Complete Reference – BPB Publication
6. Norton Peter: Introduction to Computer, McGraw-Hill.
7. Leon, Alexis & Leon, Mathews: Introduction to Computers, Leon Tech World.
8. C.S. French: Data Processing and Information Technology, BPB Publications.