

**B.A Part-I (COMPUTER SCIENCE)**  
**(Semester I)(Major/Minor)**  
**Session 2025-26**

**PAPER CODE : BA114**

**SUBJECT : FUNDAMENTALS OF INFORMATION TECHNOLOGY**

Minimum Pass Marks: 35%  
Credit : 3

Total Marks: 70

External Mark: 50(Theory)

Internal Assessment: 20

**Course Objectives**

- Aware students about basic of computer and its evolution.
- Provide knowledge of different units of computer like processing, IO, and storage unit
- Applications of IT.
- Advanced trends in IT.

**Learning Outcome**

On the successful completion of the course, students will be able to;

- Have a clear understanding of fundamentals of computers to as to apply it in real life problems
- Develop an in depth knowledge of various motivational theories
- Develop skills to get employment in I.T. field

**A) Instructions for paper-setter**

The question paper will consist of three sections, Sections A, B & C. Sections A & B will have four questions each from the respective sections of the syllabus out of which the student will be required to attempt two questions from each section. Each question will carry 8 marks, which may be segregated into sub-parts, Section C will be compulsory with 09 short answer type questions of 02 marks each, which will cover the entire syllabus.

**B) Instructions for candidates**

1. Candidates as required to attempt two questions each from sections A & B of the question paper and the entire section C
2. Use of non-programmable scientific calculator is allowed.

**SECTION A**

**Computer Fundamentals:** Block diagram of a computer, characteristics of computers and generations of computers. Categories of Computers - Supercomputer, mainframe computer, network server, Workstation, Desktop computers, notebook computer, Tablet PC, handheld PC, smart phone.

**Input Devices:** Keyboard, Mouse, Joy tick, Track, Bali, Touch Screen, Light Pen, Digitizer, Scanners, Speech Recognition Devices. Optical Recognition Devices-OMR, OBR, OCR

**Output Devices:** Monitors, Impact Printers-Dot matrix, Character and Line printer, Non Impact Printers-DeskJet and Laser printers, Plotter.

**Memories:** Memory Hierarchy, Primary Memory-RAM, ROM, Cache memory, Secondary Storage Devices-Hard Disk, Compact Disk, DVD, Flash memory

**Software:** Types of Software- System Software, Application Software, Firmware, Type of System: Operating Systems, Language Translators, Utility Programs, Communications Software

**Commonly Used Application Software:** Word Processor, Spreadsheet, Database, Education, Entertainment Software.

**Computer Languages:** Machine language, assembly language, High level language, 4GL.

**SECTION B**

**Number System:** Non-positional and positional number systems, Base conversion, Concept of Bit and Byte, binary, decimal, hexadecimal, and octal systems, conversion from one system to the other. Binary Authentic Addition, subtraction and multiplication, 1's complement, 2's complement, subtraction. Using 1's complement and 2's complement.

**Computer Codes:** weighted and non-weighted code, BCD, EBCDIC, ASCII, Unicode

**Computer Network:** Network types, network topologies.

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**Internet Related Concepts: Internet:** World Wide Web, Hypertext, Uniform Resource Locator, Web Browsers, IP Address, Domain Name, Internet Services Providers, Internet Security, Web Search Engine, Net Surfing, web portal, Wiki, Blog

**Advanced Trends in IT:** Mobile Internet, GPS, 3G, 4G, Wi-Fi, Bluetooth, Cloud Technology, Virtual LAN Technology, Firewall, E-Commerce, M-Commerce, Nanotechnology, Virtual Reality, BPO and KPO, Online shopping, Social Media YouTube, FaceBook, LinkedIn, Twitter, Instagram.

**Applications of IT:** IT in Business and Industry, IT in Education & training, IT in Science and Technology, IT and Entertainment, Current Trends in IT Application - AI, Virtual Reports, voice recognition, Robots, Multimedia Technology.

**Reference Books:**

1. Peter Nortorn, Introduction to Computers, Seventh Edition
2. V. Rajaraman, Fundamentals of Computers, PHI.
3. Larry E. Long and Nancy Long, Computers: Information Technology in Perspective, PHI.
4. N.Subramanian, Introduction to Computers, Tata McGraw-Hill
5. D.H. Sanden, Computers Today, McGraw-Hill,

