

ASIAN EDUCATIONAL INSTITUTE
(AN AUTONOMOUS COLLEGE)

BA PART-I

SEMESTER - I

BA-MAJ-COMP-01

Session 2024-25

BA-MAJ-COMP-01 : FUNDAMENTALS OF COMPUTER SCIENCE

Total Marks: 70
External Examination: 50
Internal Assessment: 20

Maximum Time: 3 Hrs.
Minimum Pass Marks: 35%
Lectures to be delivered: 45-55 Hrs.

A) Instructions for paper-setter

The question paper will consist of three sections A, B & C. Sections A & B will have four questions from the respective sections of the syllabus and will carry 30% marks each. Section C will have 6-12 short answer type questions which will cover the entire syllabus uniformly and will carry 40% marks in all.

B) Instructions for candidates

1. Candidates are 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.

COURSE OBJECTIVES:

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

LEARNING OUTCOMES:

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

- Have a clear understanding of fundamentals of computers so 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

SECTION A

Computer Fundamentals: Block diagram of a computer, characteristics of computers and generations of computers. Categories of Computers - Supercomputer, mainframe computer,

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network server, Workstation, Desktop computers, notebook computer, Tablet PC, handheld PC, smart phone.

Input Devices: Keyboard, Mouse, Joy tick, Track Ball, 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 Software: 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

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

Computer Network: Network types, network topologies.

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, Google+.

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.

Text/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. Sanders, Computers Today, McGraw- Hill.

External Marks: 30

Maximum Time: 3 Hrs

Minimum Pass Marks: 35%

Practical Units to be conducted: 45-55 Hrs

The laboratory course will comprise of Activities related to GUI based operating system and exercise to what is learnt under Paper BCOMP101 such as:

Operating System

Activity 1: Installation and Software & Drivers installation.

Activity 2: Basic components of Window-Desktop, Icons, Taskbar, Status Bar,
Wallpapers, Screen Saver

Activity 3: Start Menu: Accessories- Notepad, Calculator, Clock, Date and Time, Disk
Defragmentation, Working with Control Panel.

Activity 4: Taskbar properties - Maximize Minimize, Restore, and Close.

Activity 5: Creating Files, Folders, Shortcuts, Moving folders (right click options)

Internet

Activity 1: Connecting through Wi-fi, Blue tooth and Hot Spot.

Activity 2: Web Surfing, searching contents through Search Engines.

Activity 3: Creating and maintaining Web Blogs and Web portals

Social Media

Activity 1: Creating account, linking accounts, setting profiles and preferences.

Activity 2: Posting messages, replying, forwarding, tagging contents.

Activity 3: Online shopping, comparing prices etc.

Activity 4: Creating and maintaining social profiles at LinkedIn, FaceBook, Twitter etc.

The breakup of marks for the University Examination will be as under:

Lab Record

05 Marks

Viva Voce

10 marks

Program Development And Execution

15 Marks

