

Dr. Babasaheb Ambedkar Open University
Term End Examination July – 2026

Course	: BSCCS	Date	: 18/07/2026
Subject Code	: BSCCS-103	Time	: 11:30am to 01:45pm
Subject Name	: Computer Fundamentals and Security	Duration	: 02.15 Hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. Explain Functional Components of Computer System.
2. What is instruction format? Explain various addressing modes.
3. Describe the impact of computers on society, education, industry, government and business.
4. Explain Types of Computer Systems.
5. Write detailed note on Logic Gates.

Section B

Answer the following (Attempt any four) (20)

1. Write short note on computer bus.
2. Explain the difference between RAM and ROM.
3. Explain file management operations.
4. Write short note on scanner.
5. Write short note on printers.
6. Write difference between LAN and WAN.

Section C

Part – A (Multiple Choice Questions) (10)

- Which component of the CPU is primarily responsible for performing arithmetic and logical operations?
 - Control Unit (CU)
 - Arithmetic Logic Unit (ALU)
 - Register
 - Cache Memory
- Which number system uses the symbols 0–7?
 - Binary
 - Decimal
 - Octal
 - Hexadecimal
- Which logic gate produces a HIGH output only when all inputs are HIGH?
 - OR
 - NAND
 - XOR
 - AND
- Which storage device uses optical technology for reading and writing data?
 - DVD
 - Magnetic Tape
 - Hard Disk
 - SSD
- Which communication medium transmits data using pulses of light?
 - Twisted Pair Cable
 - Coaxial Cable
 - Optical Fiber
 - Telephone Cable
- Which security principle ensures that information is available whenever authorized users need it?
 - Confidentiality
 - Authentication
 - Availability
 - Authorization

- 7 Which of the following is an example of malicious software?
A Firewall B Malware
C Backup Utility D Antivirus
- 8 Which input device is specifically designed to read printed barcodes?
A OCR B Barcode Reader
C OMR D MICR
- 9 Which motherboard chipset traditionally manages communication between the CPU and RAM?
A Southbridge B BIOS
C AGP Controller D Northbridge
- 10 Which stage of the instruction cycle interprets the fetched instruction?
A Instruction Operation Decoding B Data Operation
C Instruction Fetch D Operand Store

Part – B (Do as Directed)

(10)

State whether the following statements are true or false

- 1 A hexadecimal number system uses sixteen different symbols.
- 2 An OR gate produces a LOW output only when all inputs are LOW.
- 3 A firewall is primarily used to increase the physical storage capacity of a computer.
- 4 The decimal number system has a base of 2.
- 5 Regular data backup is an effective practice for reducing the impact of data loss.
- 6 During the Operand Store stage, the result of an operation may be written to memory or an output device.
- 7 SRAM generally provides faster access than DRAM.
- 8 The Program Counter stores the data currently being processed by the ALU.
- 9 PROM cannot normally be programmed.
- 10 The Address Bus transfers processed data between the CPU and memory.
