

Roll No.

AH-6361

B. Sc. (First Semester)

Discipline Specific Core Course (CSSC-01)

EXAMINATION, Dec./Jan., 2024-25

COMPUTER SCIENCE

(Computer Fundamental and Operating System)

Time : Three Hours

Maximum Marks : 70

Note : Answer all questions.

Section—A

Note : Objective type questions.

10×1=10

1. Which ancient Indian text is associated with the binary system ?

- (a) Sulba Suta
- (b) Bhuta-Samkhya
- (c) Pingala
- (d) Katapayadi

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2. What is the primary function of a microprocessor ?
 - (a) Store data
 - (b) Process data
 - (c) Display data
 - (d) Transmit data
3. Which of the following is a non-impact printer ?
 - (a) Dot matrix printer
 - (b) Inkjet printer
 - (c) Daisy wheel printer
 - (d) Line printer
4. What does USB stand for ?
 - (a) Universal Serial Bus
 - (b) Universal System Bus
 - (c) Unified Serial Bus
 - (d) Unified System Bus
5. Which type of memory is known for its high speed and is located between the CPU and main memory ?
 - (a) Primary memory

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- (b) Secondary memory
 - (c) Cache memory
 - (d) Virtual memory
6. What is the main purpose of the Memory Management Unit (MMU) ?
 - (a) To manage input/output operations
 - (b) To manage memory allocation
 - (c) To manage data storage
 - (d) To manage user interfaces
7. Which command in DOS is used to remove a directory ?
 - (a) md
 - (b) rd
 - (c) cd
 - (d) rm
8. What is the function of the 'grep' command in Linux ?
 - (a) To list files
 - (b) To find patterns in files
 - (c) To move files
 - (d) To delete files

9. Which of the following is a type of operating system ?
- Windows
 - USB
 - IEEE 1394
 - AGP
10. What is the primary role of an arithmetic processor ?
- To perform logical operations
 - To perform arithmetic operations
 - To manage memory
 - To control input/output operations

Note : Short answer types questions : $5 \times 4 = 20$

- Explain the significance of the Katapayadi system in Indian mathematics.
- Describe the evolution of digital computers.
- What are the differences between impact and non-impact printers ?
- Explain the concept of virtual memory and its importance.
- Describe the booting process of DOS.

Section—B

Note : Descriptive answer type question : $4 \times 10 = 40$

Unit—I

- Discuss the historical development of the number system in India and its influence on modern computing.

Or

 - Explain the major components of digital computers and their functions.

Unit—II

- Describe the various types of I/O devices and their roles in computer systems.

Or

 - Explain the differences between serial and parallel data transfer schemes, including examples of each.

Unit—III

- Discuss the memory hierarchy in computer systems and the role of each type of memory.

Or

 - Explain the concept of memory management and the function of the Memory Management Unit (MMU).

Unit—IV

4. (a) Describe the evolution of operating systems and the key features of DOS.

Or

- (b) Explain the structure of the Linux operating system and the use of basic Linux commands.