Roll No. | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 09

B.Tech. (AI & ML/ AI & DS/CSE/Cyber Security/DS/IOT and Cyber Security including Block chain Technology) (Sem.–4)

COMPUTER ORGANIZATION AND ARCHITECTURE

Subject Code : BTES-401-18

M.Code : 77627

Date of Examination : 06-06-2025

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION - A

1. Write briefly :

a) CPU

b) Memory transfer instruction

c) Control Unit

d) Three address instruction

e) DMA

f) Cache memory

g) SCII

h) USB

i) l's complement

j) Carry look ahead adder

SECTION - B

2. Explain any 5 addressing modes with example.

3. Discuss the various representations of positive and negative number. Which representation is used by computer and why?

4. Differentiate between synchronous and asynchronous data transfer.

5. What is virtual memory? What is the concept of page replacement?

6. Write a note on cache coherency and concurrent access to memory.

SECTION - C

7. Explain how addition and subtraction takes place in computer system.

8. Differentiate between privileged and non-privileged instructions, hardware and software interrupts.

9. Describe memory hierarchy and memory interleaving in detail.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.