Roll No. | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (AI & ML/CSE/DS/IT/ Internet of things and Cyber Security Including Blockchain Technology) (Sem.–4)

COMPUTER ORGANIZATION AND ARCHITECTURE

Subject Code : BTES-401-18

M.Code : 77627

Date of Examination : 23-05-2024

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) Write functioning of USB?

b) What do you mean by floating point arithmetic?

c) What is difference between SPMD and MIMD machine?

d) What do you mean by I/O processors?

e) Differentiate between program interrupt and subroutine call.

f) What is meant by Interleaved memory?

g) Write down two properties of SIMD.

h) Distinguish between Isolated and Memory-Mapped I/O.

i) Distinguish between static RAM and dynamic RAM.

j) Name various interrupts in 8085.

SECTION-B

2. Show a step-by-step multiplication process using Booth's algorithm to multiply two numbers 17 * (-7).

3. Explain what different types of memories are available and differentiate between them according to their application?

4. Discuss the fetch-decode and execute cycles of a processor.

5. Write the basic feature of static and dynamic memory. Also give an example.

6. Discuss the role of cache coherency in parallel processors.

SECTION-C

7. Explain in detail the different mappings used for cache memory. Compare them.

8. With a neat block diagram, explain how the DMA controller is initialized for DMA data transfer?

9. Write short notes on the following :

   a) SMIMD

   b) Pipelining in CPU design.

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.