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

Total No. of Questions : 09

B.Tech. (IT) (Sem.–3)

COMPUTER ARCHITECTURE

Subject Code : BTES-302-18

M.Code : 76394

Date of Examination: 15-12-2023

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. Answer briefly :

a) What are addressing modes?

b) What is the Program Counter?

c) What is the difference between a hardwired and microprogrammed control unit?

d) Write advantages of DMA.

e) What is SCII?

f) Define throughput in the pipeline.

g) What is the MESI protocol?

h) What is the Write through policy while writing into a Cache?

i) What is memory interleaving?

j) What are MIMD computers?

SECTION-B

2. List out the five categories of the 8085 instructions. Give an example of the instructions for each group.

3. How negative numbers are stored in the computer? Explain addition and subtraction algorithm.

4. Draw and explain the block diagram of the DMA.

5. Discuss cache coherence in detail.

6. Discuss memory hierarchy with various performance parameters.

SECTION-C

7. Discuss Carry look-ahead adder with its diagram. List out its advantages and disadvantages.

8. How pipelines enhance the performance of uniprocessor systems? Explain the instruction pipeline in detail.

9. What is a Control Unit? Discuss the advantages and disadvantages of two approaches used for designing control unit.

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