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

Total No. of Questions : 09

B.Tech. (Civil Engineering/ Electrical Engineering/ Electronics & Communication Engineering) (Sem.–6)

COMPUTER ORGANIZATION AND ARCHITECTURE

Subject Code : BTES-401-18

M.Code : 79261

Date of Examination : 15-07-22

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. What is a carry look-ahead adder?

b. What is address bus?

c. Discuss the principle behind the Booth's algorithm?

d. Write the 2's complement of 10011011.

e. What are interrupts? How are they handled?

f. What is an Instruction Code?

g. What is memory interleaving?

h. Compare hardwired and Micro programmed controls.

i. What is Memory Access Time?

j. Briefly explain Primary storage and Secondary storage.

SECTION-B

2. Discuss briefly encoding of machine instructions.

3. Describe the algorithm for integer division with suitable examples.

4. Explain in detail about direct and set associative map technique in cache.

5. Explain the design of micro-programmed control unit in detail.

6. Explain various types of pipeline hazards and how to handle them?

SECTION-C

7. Elaborate the need of addressing in a computer system. Explain the different addressing modes with suitable examples.

8. Explain programmed I/O and interrupt driven I/O with an example.

9. What is virtual memory? Explain the steps involved in virtual memory address translation.

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.