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Total No. of Pages : 02

Total No. of Questions : 18

B.Tech.(CSE) (2018 Batch) (Sem.-4)

**COMPUTER ORGANIZATION AND ARCHITECTURE**

Subject Code : BTES-401-18

M.Code : 77627

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**

**Write briefly :**

1. Distinguish between auto increment and auto decrement mode.
2. Write a register transfer sequence to read a word from memory.
3. Mention some advantages of USB.
4. How many memory chips are needed to construct  $2M \times 16$  memory system using  $512K \times 8$  static memory chips?
5. Define and explain memory hierarchy.
6. What is a Micro Program Sequencer?
7. State the advantages of Virtual Memory.
8. Write the logic equations of binary half adder?
9. Under what situations the micro program counter is not incremented after a new instruction is fetched from micro program memory.
10. What are the disadvantages of increasing the number of stages in pipeline processing?

### **SECTION-B**

11. Explain briefly Integer Addition and Subtraction Algorithm.
12. What is a Mapping Function? What are the ways cache can be mapped?
13. Explain the working of carry look ahead adder.
14. With examples explain the data transfer, Logic and Program control instructions.
15. Explain in detail about the Flynn's classification.

### **SECTION-C**

16. What is Instruction Hazard? Explain the methods of dealing with instruction hazards.
17. Explain the basic organization of micro programmed control unit and generation of control signals using micro program.
18. Discuss about the various components of computer system.

**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.**