328675(28)

B. E. (Sixth Semester) Examination, April-May 2020

(New Scheme)

(Et & T Branch)

COMPUTER ORGANIZATION & ARCHITECTURE

(Professional Elective-I)

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : *Attempt all questions. Part (a) of each question is compulsory. Attempt any two parts from (b), (c) & (d) of each question. Answer should be to the point and brief. Assume any suitable data if necessary.*

Unit-I

1. (a) Define Accumulator.   2

(b) Explain Memory Data Register instruction register with examples. 7

(c) Explain various micro operations with example. 7

(d) Explain various addressing modes with the instruction formats. 7

Unit-II

2. (a) Define Microinstructions. 2

(b) Compare Hard wired and Microprogrammed Control Organization. 7

(c) Explain the implementation of control unit memory with the help of block diagram. 7

(d) Explain the address and instruction sequencing in Microprogramming. 7

Unit-III

3. (a) Define Overflow and Underflow. 2

(b) Explain signed magnitude addition and subtraction operation with example. 7

(c) Explain the hardware Algorithm for fixed point division. 7

(d) Explain Booth's algorithm for multiplicaton with suitable example. 7

Unit-IV

4. (a) Define I/O intrerfacing. 2

(b) Discuss programmed I/O with the help of block diagram. 7

(c) Explain working of DMA controller with the help of block diagram. 7

(d) Compare loosely coupled and tightly coupled systems. 7

Unit-V

5. (a) Draw memory Hierarchy. 2

(b) Explain memory interleaving schemes with example. 7

(c) Explain Cache memory and Virtual memory and draw the memory mapping table for virtual address. 7

(d) Compare RISC & CISC processors. 7