

**6E3086****6E3086**

**B.Tech. VI Semester (Back) Examination, April/May -2017**  
**Electronics & Communication Engg.**  
**6EC2(O) Micro Processor And Micro Controller**  
**EX, EC**

**Time : 3 Hours****Maximum Marks : 80****Min. Passing Marks : 26****Instructions to Candidates:**

Attempt any **five questions**, selecting **one question from each unit**. All Questions carry **equal marks**. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitable be assumed and stated clearly). Units of quantities used/calculated must be stated clearly.

**Unit-I**

1. a) Explain in detail the functioning of databus, address bus and control bus. (8)
- b) Explain briefly the concept of 'bus' in microprocessor. Why multiplexing is done in 'bus'? (8)

**OR**

1. a) Define tri-state logic and explain the function of the following devices : (4 × 2 = 8)
  - i) Buffer
  - ii) Decoder
  - iii) Latches
  - iv) Encoder
- b) Is it possible that an output and input port have the same 8-bit address? If yes how does the 8085 MPU differentiate between the ports? If No, why? (8)

**Unit-II**

2. a) Discuss the function of the following signals of 8085, INTR,  $\overline{INTA}$  HOLD, HLDA and READY. (8)

b) Explain the internal Architecture of 8085 with the help of block diagram. (8)

OR

2. a) Explain the contents of accumulator to run SIM instruction. (8)

b) Discuss RISC and CISC architecture. (8)

### Unit-III

3. a) Draw and explain the timing diagram of opcode fetch operation and Memory read operation. (8)

b) What do you mean by Instruction set? Explain : (8)

i) Flag

ii) Machine cycle

iii) T-states

iv) Addressing mode

OR

3. a) What do you mean by programming and debugging? (8)

b) Explain the formats of 8 bit and 16 bit instruction. (8)

### Unit-IV

4. Draw the interfacing diagram of 8257 DMA-controller with 8085 microprocessor and explain its operation. (16)

OR

4. a) What are the different operating modes of 8255? (8)

b) What are I/O ports? What are programmable and non-programmable ports? (8)

### Unit-V

5. Explain arithmetic instructions of 8051. Write an ALP in 8051 to add the contents of 9000 and 9001 address and store the result at address 9002. (16)

OR

5. a) Explain with example of various addressing mode of 8051. (8)
- b) Write short note on : (8)
- i) Timer & interrupts
  - ii) Special function registers

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