

Microprocessors & Computer Architecture

Time : 3 Hours

Min. Passing Marks : 24

Maximum Marks : 80

Instruction 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 suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.)

Unit-I

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OR

1. (a) Explain the various types of buses used in 8085 microprocessor. [8]
 (b) Draw the architecture of 8085 microprocessor and explain functions of various registers. [8]
3. (a) Explain the control word in 8255 PPI. What are different modes of operations possible in 8255? [8]
 (b) Draw the block diagram of 8279 and explain the function of each block. Also describe its command word format. [8]

OR

1. (a) How address lines are multiplexed? Explain in detail with the help of latching circuit diagram. [8]
 (b) Explain the control and status signals available in 8085 microprocessor. [8]

Unit-IV

4. (a) Draw internal architecture of 8086. Explain the function of various registers. [8]
 (b) Draw pin diagram and explain various pins of 8086 microprocessor in minimum and maximum modes. [8]

Unit-II

2. (a) Explain the following instructions of the 8085 microprocessor. [8]
 (i) STAX B
 (ii) XTHL
 (iii) XCHG
 (iv) SPHL
 (b) Write an assembly language program for finding 2's complement of a given 8 bit number. [8]

OR

2. (a) Mention various addressing modes in 8085 with suitable example. [8]
 (b) Explain the use of rotate instructions, with the help of suitable examples. [8]

Unit-III

3. (a) Explain the interfacing of 8257 to 8085 microprocessor. [8]
 (b) Draw the block diagram of programmable Interval Timer 8253 and explain its various blocks. [8]

Unit-V

5. (a) Write short note on (any two) : [16]
 (i) Virtual Memory
 (ii) Different types of micro operations
 (iii) Different types of ROM
 (iv) Cache memory