B.E. Electrical (Electronics & Power) Engineering (Model Curriculum) Semester - V

TE106 - Microprocessors

2606

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Notes : 1. All questions carry marks as indicated.
2. Assume suitable data wherever necessary.
3. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Draw and explain the architecture of 8085 microprocessor. **8**

    b) Draw timing diagram of instruction MVI A, 35H stored at location 2000H. Explain the operation. **8**

OR

2. a) Explain the function of followings pins of μp 8085. **6**
       i)   ALE
       ii) HLDA
       iii) HOLD
       iv) SID.

    b) Explain the flag register of μp 8085. **6**

    c) State how address bus and data bus is demultiplexed in μp 8085. **4**

3. a) Give the status of flags and addressing mode and T - state required for following instruction. **8**
       i)   JMP 2000 H
       ii) MOV A, B
       iii) INR M
       iv) ADD A, M

    b) Write an assembly language program of μp 8085 to search smallest number in an array of 10 numbers. **8**

OR

4. a) Write a simple delay subroutine involving a register pair of 8085. What is the maximum delay that can be achieved. **8**

    b) What is stack memory? Define top of stack? Explain PUSH and POP operation related with stack memory with an example. **8**

5. a) Compare I/O mapped I/O and memory mapped I/O. **6**

    b) Interface 8k EPROM and 8k RAM IC's with μp 8085. The available IC's are 4k EPROM and 4k RAM. Assume suitable address. **10**

OR

6.	a)	Draw and explain the Hardware interrupt of $\mu p\,8085$.	**8**
	b)	State the instruction format of RIM and SIM instruction.	**8**
7.	a)	With the help of block diagram explain various modes of operation of IC 8255	**8**
	b)	Interface DAC 0808 with $\mu p\,8085$. Write a program to generate the triangular wave continuously at the output.	**8**

OR

8.	a)	Draw the interfacing diagram of 7 - segment LED display with $\mu p808P$.	**8**
	b)	Draw and explain block diagram for measurement of power factor using $\mu p\,8085$	**8**
9.	a)	Draw and explain the block diagram of programmable Interval Timer IC 8254.	**8**
	b)	Explain the rate generator mode of IC 8254 PIT.	**8**

OR

10.	a)	State and explain the CWR's of IC 8254.	**8**
	b)	Interface IC 8254 with $\mu p\,8085$ in I/O mapped I/O.	**8**

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