

M.E. First Semester (Electrical (Electrical Power System)) (Full Time) (Old)  
**13301 : Microprocessors & Microcontrollers : 1 SEPS 3**

P. Pages : 1

Time : Three Hours



**AW - 3658**

Max. Marks : 80

- Notes :
1. Answer **two** question from Section A and **two** question from Section B.
  2. Assume suitable data wherever necessary.
  3. Use of pen Blue/Black ink/refill only for writing the answer book.

**SECTION – A**

1. a) Explain in detail the interrupt structure of 8085. 8  
b) Explain BIU and EU of 8086 microprocessor. 12
2. a) Explain CALL and RETURN instructions of 8085 MPU. 10  
b) Draw and explain Timing diagram of MVIA, 32 instruction. 10
3. a) Explain interfacing of keyboard with 8085 MPU using 8255 PPI. 12  
b) Explain with example different addressing modes of 8085. 8

**SECTION – B**

4. a) Explain the functions of TCON and TMOD special function register of 8051. 10  
b) Write an 8051 ALP to double the number in register R<sub>1</sub> and store the result in R<sub>2</sub> and R<sub>3</sub>. 10
5. a) Explain following instructions of 8051 10  
i) INC A ii) ADD @ RP  
iii) MOVC A, @ A + DPTR iv) DJNZ RO, Back  
v) SET DP 1.3 vi) SWAP A  
b) Explain different modes of operations of timer of 8051. 10
6. a) Draw and explain internal architecture of 8051 microcontroller. 12  
b) Discuss the uses of pins of port 3 of 8051 microcontroller. 8

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