Code: **EEPC1T1**

PVP 12

I M.Tech-I Semester-Regular Examinations-March 2014

MICROPROCESSORS & MICROCONTROLLERS
(POWER SYSTEM CONTROL AND AUTOMATION)

Duration: 3 hours Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

1 a) Draw the block diagram of 8086 and explain the function of each block. List the flag registers. 8 M

b) List the addressing modes of 8086 processor with examples 6 M

2 a) Explain the function of the following instructions: 6 M
i) AAD
ii) IMUL
iii) INTO
iv) JCXZ
v) LES
vi) SAR.

b) What are the assembler directives in 8086 microprocessor 8 M

3 a) Discuss the 8086 Bus activities during READ machine cycle with neat timing diagrams. 7 M

b) Distinguish the minimum mode and maximum mode signals on the 8086 pin diagram. 7 M

4 a) Explain DMA with a block diagram 7 M

b) List various I/O operations with examples 7 M

5 a) Explain stack operation in 8086 and LIFO 7 M

b) What are the software and hard ware interrupts in 8086 7 M

6 a) Discuss different modes of operation of programmable interval timer. 7 M

b) Draw the block diagram of 8251 USART and explain the function of each block and also explain how do you set the band rate. 7 M

7 a) Draw & explain the block diagram of 8259 PIC. 7 M

b) Write the initialization instruction for 8259 PIC for the following specification: 7 M
i) Interrupt type 32
ii) Edge triggered, single & ICW4 needed

8 a) Draw the memory map of 8051 what is bit addressable area? What is the power saving modes in 8051? 8 M

b) Discuss the interrupt structure in 8051. 6 M