6E3086

Roll No. _____ [Total No. of Pages : 3

6E 3086

B.Tech. VI Semester (Back) Examination, May 2015
Electrical and Electronics Engineering
6EX2 (O) Microprocessor and Microcontroller
Common for EE & EX

Time : 3 Hours

Maximum Marks : 80
Min. Passing Marks : 24

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

Unit - I

1. a) What are the different types of buses used in Microprocessor. Explain briefly. **(8)**

   b) Compare static RAM with dynamic RAM **(8)**

OR

1. a) Write a note on

   i) Buffer

   ii) Latches

   iii) encoder

   iv) decoder **(8)**

   b) What are tri state devices and why they are essential in bus Oriented system **(8)**

Unit - II

2. **a)** Explain the architecture of 8085 Microprocessor in detail **(8)**

b) Explain the function of ALE and IO/$\overline{M}$ of 8085. Explain the demultiplexing of lower order address bus and data bus. (8)

OR

2. a) Explain the hardware and software interrupt supported by 8085 (8)

b) Explain the RISC and CISC Architecture of the processors and discuss their salient features. (8)

Unit - III

3. a) Explain the following instructions of 8085 Microprocessor by taking an example

i) CMP

ii) LDAX

iii) XCHG

iv) DAD (8)

b) Write a program for creating a delay of 1m sec. Assume the system clock frequency of 2 MHz (8)

OR

3. a) Explain the addressing modes available in 8085 Microprocessor . (8)

b) Write a program to find 2's complement of a number. (8)

Unit - IV

4. a) Explain the functional block diagram of 8254 programmable interval timer. (8)

b) Explain the various operating modes of programmable peripheral interface chip 8255 (8)

OR

4. a) Draw the block diagram of 8257 DMA controller and explain the process of data transfer from peripheral to system memory (10)

b) Explain the matrix key board interface in 8279 (6)

Unit - V

5. a) Draw and explain the functional block diagram of 8051. (8)

b) Explain the addressing modes of 8051 with suitable Example (8)

OR

5. a) Explain various timers and interrupts and their functions in 8051 Microcontroller. (8)

b) Explain the interfacing of LCD display with 8051 Microcontroller. (8)