MEMT-105

M.E./M.Tech. I Semester

Examination, December 2014

Micro Controller System Design

Time: Three Hours

Maximum Marks: 70

Note: Anemptany fivequestions.Allquestionsamy equal math.

1. a) Distinguish between fetch cycle, execute cycle and machine cycle.
   b) With the help of a internal architecture of Inlet 8085 microprocessor? Explain the concepts involved in accepting and transfer of data from the microprocessor.

2. a) What basic advancement has been incorporated in the architecture of 8086, compared to 8085 architecture.
b) How the address of a memory location is computed in 8086 microprocessor based system.

3. a) What is meant by quasi-bidirectional port? Why is port o of 8085 true bidirectional?
b) Give detailed register structure of 8051 microcontroller.

4. a) Explain how to interface DMA controller with 8086 microprocessor.
   b) Explain the term object oriented interfacing and programming in detail.

5. Write short notes on the following:
   a) Atmel 89C 51/52 microcontrollex b) PIC microcontroller.

6. e) Design a small microcontroller based system and describe its working.
b) Give the comparisons between embedded controllem and process control.

7. a) Which architecture is used for DSP processors? Explain in detail.
   b) Design a small system using TI-DSP and explain its working.

8. Write short note on any two of the following:-
   a) 1/0 interfacing and programming
   b) Addressing mode of 8085
   c) Modular approach
   d) Data acquisition