Roll No .....

MEDC-102

M.E./M.Tech., I Semester

Examination, December 2014

Micro Controller System Design

Time : Three Hours

Maximum Marks : 70

Note : 1. Attempt any five questions.
2. Each question carries equal marks.

1. a) Draw and discuss the internal block diagram of 8086. Explain the concept of segmental memory. What are its advantages.

   b) Discuss in brief the instruction set of 8086.

2. a) Draw the programmers model of 8086 microprocessor and label it neatly.

   b) Write the addressing modes of 8086 with suitable example. Mention the addressing modes which are not supported by 8085? What do you mean by segment override prefix.

3. a) Explain the MOV instruction and JUMP instruction of 8086.

   b) How will you set and reset the "Direction flag bit of flag register"?

4. a) Explain 8086 interrupt structure.

   b) How does 8086 decide the priority of interrupts.

5. a) Explain the block diagram and function of each block of 8251 USART.

   b) What are RS-232C serial input/ output standard?

6. a) Describe the working of 8255 in BSR and input/ output modes.

   b) How will you interface stepper motor using 8051? How can you control the speed.

7. a) Discuss interfacing of 8051 with 8086.

   b) Draw and explain expanded block diagram of transmitter and receiver section of 8251 USART.

8. Write short notes on any two of the following.

   i) DSP architecture with microcontrollers.

   ii) Recursion and debugging

   iii) Memory mapping in microcontrollers

   iv) Interrupt handling timing.

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