A 1223

B.E./B.Tech. DEGREE EXAMINATION, MAY/ JUNE 2007.

Sixth Semester

Electrical and Electronics Engineering

EE 340 — MICROPROCESSOR AND APPLICATIONS

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is the clock frequency of microprocessor 8085?

2. Define interrupt.

3. How many data lines and address lines are available in 8086?

4. Compare microprocessor 68000 with microprocessor 8086.

5. Name any two 16 bit microcontroller.

6. Give the applications of microcontroller.

7. What is DIP switch?

8. What is the need for interfacing?

9. Give the control word format for 8255.

10. What are the functions of DMA controller?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Draw the timing diagram for the instruction LXI H, 8000. (8)

(ii) Discuss in detail, the different instruction format that are followed in 8085. (8)

Or

(b) (i) Explain the functions of software and hardware interrupt. (8)

(ii) Draw the internal architecture of 8085. (8)

12. (a) Explain the function of storing and retrieving of 16 bit at an odd and even addressed bank with necessary diagram. (16)

Or

(b) Describe in detail, the different addressing modes of 8086. (16)

13. (a) Draw the functional block diagram of 16 bit microcontroller and explain. (16)

Or

(b) Explain the following features of microcontroller

(i) Bit-wise manipulation (8)

(ii) On chip DAC and ADC. (8)

14. (a) Compare and contrast memory mapped I/O and peripheral mapped I/O. (16)

Or

(b) With neat diagram, explain the interfacing of mocroprocessor with seven segment display. (16)

15. (a) Draw and explain the function of programmable interval timer(8254). (16)

Or

(b) Explain the internal block diagram of USART (8251). (16)