Reg. No. : | | | | | | | | | | |

L 1385

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2008.

Fourth Semester

Information Technology

IF 250 — MICROPROCESSOR AND MICROCONTROLLER APPLICATIONS

Time : Three hours | Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. What is the necessity to have two status lines S1 and S0 in 8085?

2. List the types of instructions for 8085 microprocessor.

3. What is the advantage of microcontroller over microprocessor?

4. Define SBUF register in 8051.

5. Name any two processor control instructions in 8086.

6. Mention the functions of the NMI pin in 8086.

7. What are the registers available in 8257?

8. What is 8259? What are its functions?

9. List some of the high power devices.

10. What is a digital filter?

PART B — (5 × 16 = 80 marks)

11. (a) Draw the block diagram of 8085 microprocessor and explain its architecture. (16)

Or

(b) (i) Write an 8085 ALP to convert 8–bit binary number to ASCII code. (8)

(ii) Draw the timing diagram for the 8085 instruction MVI A, 43 H. (8)

12. (a) Draw the architecture and pin diagram of Microcontroller 8051 and explain. (16)

Or

(b) (i) Explain the different timer mode operations of 8051. (10)

(ii) List the addressing modes of 8051. Explain with an example. (6)

13. (a) (i) Name the various registers and their usage in 8086 processor. (10)

(ii) Write an 8086 ALP to find the largest number in an array. (6)

Or

(b) (i) Explain the maximum mode 8086 system with neat diagram. (10)

(ii) Enlist the salient features of Intel 80486. (6)

14. (a) Draw the functional block diagram of 8255. Explain with the various modes of operation. (16)

Or

(b) Explain the features of keyboard/display controller 8279 with neat block diagram. (16)

15. (a) With neat diagram explain a microprocessor based temperature control system. (16)

Or

(b) With neat diagram explain a microprocessor based stepper motor control system. (16)

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