Code : 103301

2013 (A)

INTRODUCTION TO MICROPROCESSOR

Time : 3 hours *Full Marks* : 70

Instructions :

(i) The marks are indicated in right-hand margin.

*(ii) There are **TEN** questions in this paper.*

*(iii) Attempt any **FIVE** questions.*

1. *(a)* Draw the pin diagram of Intel 8085 microprocessor and discuss the function of various pins. 7

   (b) What are the different status flags of Intel 8085 microprocessor? Discuss the function of each flag. 7

2. *(a)* Explain the purpose of address bus, data bus and control bus in 8085 microprocessor. 7

   (b) Explain how the program counter keeps track of instructions to be executed while running a program. 7

3. *(a)* Write an assembly language program to select the largest number from a data array. 7

   (b) Write an assembly language program to find the sum of a series of 8-bit number, sum may be 16-bit. 7

4. *(a)* Explain the following instructions of 8085 microprocessor : 7

   (i) POP rP

   (ii) XTHL

   (iii) LHLD addr.

   (iv) SIM

   (v) RIM

   (vi) JNC

   (vii) RAL

   (b) Draw and explain the timing diagram of the instruction LDA 2000 (H). 7

5. *(a)* Discuss the data transfer scheme between the CPU and I/O devices using interrupts. 7

   (b) Discuss the schemes of address space partitioning in 8085 microprocessor for I/O ports. 7

6. Discuss with the help of block diagram, the programmable peripheral interface, 8255A. Describe the various modes of operation in detail. 14

7. Draw the functional block diagram of Programmable Interval Timer, 8253. Discuss its different modes of operation. 14

8. With the help of schematic diagram, describe how 8085 microprocessor can be used to measure and display the speed of d.c. motor. 14

9. *(a)* Draw the pin diagram of 8086 microprocessor and explain the function of each pin. 7

   (b) What are the different registers of 8086 microprocessor? Explain their functions in detail. 7

10. Write short notes on the following : 14

    (a) Debugging

    (b) Modular Programming

    (c) MDS

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