

Roll No

CS - 601**B.E. VI Semester**

Examination, June 2016

Microprocessor and Interfacing**Time : Three Hours****Maximum Marks : 70**

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
 ii) All parts of each question are to be attempted at one place.
 iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.
 iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) Explain the difference between microprocessor and microcontroller.
 b) What is interfacing? Why it is required in microprocessor?
 c) Differentiate between the I/O mapped I/O and the memory mapped I/O.
 d) Explain commonly performed operations on microprocessor in detail.

OR

Draw a block diagram of a microprocessor controlled temperature system and identify functions of each component.

Unit - II

2. a) Define flag register of 8085 with significant of each bit.
 b) If the clock frequency is 15MHz. How much time is required to execute the instruction of 18T state.
 c) What is modular programming? Differentiate between modular programming and structural programming.

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- d) Draw 40 Pin diagram of 8085 microprocessor and explain function of each pin.

OR

Define the following instructions with example ADI, CALL, CMP, CMA, INX, LHL, NOD, NOP.

Unit - III

3. a) Draw the register organization of 8086 and explain application of each register.
 b) Draw and discuss read cycle timing diagram of 8086 in minimum mode.
 c) Explain Demultiplexing of the system bus in 8086.
 d) Explain various addressing modes of 8086 microprocessor.

OR

Explain the following instructions of 8086 with example. XCHG, DAA, XOR, PUSH, POP, RCR, AAA, INRET, OUT.

Unit - IV

4. a) Describe an interrupt response of 8086 microprocessor.
 b) Draw and discuss the different modes of operation of 8253.
 c) What is the advantage of DMA controlled data transfer over interrupt driven or program controlled data transfer? Why DMA controlled data transfer is faster?
 d) Discuss the architecture of 8279 with diagram.

OR

Write a short note on I/O processor.

Unit - V

5. a) Discuss the advantages of microcontrolled based system over microprocessor based system.
 b) Explain program status register of 8051 microcontroller.
 c) How does 8051 differentiate between external and internal memory.
 d) Draw and discuss internal architecture of 8051 microcontroller.

OR

Write the applications of 8051 microcontroller.

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