Subject: Computer Science   Course ID: 51517

Course Title: Microprocessor

Full Marks: 25   Time: 1 Hr. 15 min

<u>**The figures in the margin indicate full marks**</u>

Answer all the questions.

UNIT I

1. Answer *any five* of the following questions: (1 × 5 = 5)

   a) Define instruction cycle.

   b) What is the necessity of two MSB bits of Count register in DMA controller?

   c) What is addressing mode?

   d) Define machine cycle.

   e) What is microcomputer?

   f) What is the function of RESET pin of 8086microprocessor?

   g) Explain the difference between a JUMP and a CALL instruction.

   h) What is interrupt?

UNIT II

2. Answer *any two* of the following questions: (5 × 2 = 10)

   a) What are disadvantages of synchronous and asynchronous data transfer mode? How they

      can be removed in Interrupt driven mode?

   b) Why is I/O port necessary? Describe different components of a programmable I/O port.

   c) What are the difference between Cycle Stealing DMA mode and Block DMA mode?

   d) Write short note on general purpose registers of 8086

UNIT III

3. Answer *any one* of the following questions: (10 × 1 = 10)

a) What are the various ways of implementing stack in MPU? Discuss them with their advantages and disadvantages. Explain the instruction CALL addr. in 8086. (7 + 3)

b) Draw and explain the architectural diagram of 8086 microprocessor.

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