Con. 6161–11.   **MP–3880**

(3 Hours)   [Total Marks : 100]

N.B. : (1) Question No. **1** is **compulsory**.
      (2) Attempt any **four** questions out of remaining **six** questions.
      (3) Assume **suitable** data, if **necessary**.

1. (a) Explain flag register of 8085 microprocessor in brief.   5
   (b) Explain string instructions of 8086.   5
   (c) What do you mean by segmentation ? What are the advantages of using   5
       segmented memory ?
   (d) What is role of Bus Arbiter in multiprocessor.   5

2. (a) Explain the interaction between 8086 and 8087.   10
   (b) Explain pre-defined or dedicated interrupts of 8086 microprocessor.   10

3. (a) Explain with example the following addressing modes of 8086 microprocessor :– 10
       (i) Based indexed relative
       (ii) Intersegment indirect
       (iii) Indirect IO
       (iv) Register
       (v) Base relative.
   (b) What are loosely coupled and closely coupled systems ? Give example of 10
      each one and explain their working.

4. (a) Draw timing diagram with one wait state for following 8085 instructions :–   10
       (i) LDAX B
       (ii) MVI A, 20H.
   (b) Explain banking in case of 8086.   5
   (c) Explain pipelining in 8086.   5

5. Design 8086 microprocessor based system in minimum mode for following 20
   specifications :–
       (i) 8086 working at 8 MHz clock
       (ii) 8k x 8 EPROM
       (iii) 4k x 8 RAM
       (iv) One 8255 chip (I/O mapped I/O)
   Give address map and decoding scheme.

6. (a) Write a program using 8087 instructions to calculate area of circle. The radius 10
      of circle is given in short real format.
   (b) Explain addressing modes of 8085 microprocessor with example.   10

7. (a) Explain 8086 family maximum mode operation with timing diagram.   10
   (b) Distinguish between Bus Interface unit and Execution unit of 8086.   5
   (c) Distinguish between minimum mode and maximum mode of 8086.   5

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