Roll No.

24230

B. Tech. 5th Semester (CS & IT) (Common With Special Chance) Examination – December, 2019

MICROPROCESSING & INTERFACING

Paper : EE-309-F

Time : Three Hours]　　　　　[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all, selecting *one* question from each Section. Question No. 1 is *compulsory*. All questions carry equal marks.

1. (a) What are data transfer instructions and arithmetic instructions ?

   (b) Define Direct memory access.

   (c) Explain shift and rotate instructions.

   (d) What is wrong with a MOV instruction ? 5 × 4 = 20

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SECTION – A

2. (a) What are control and status signals ? Explain them. 10

   (b) Discuss the architecture of 8085 micro-processor. 10

3. (a) Differentiate between vectored and Non vectored interrupt. Also explain interrupt structure with proper diagram. 10

   (b) Write a program to calculate the sum of the series of even numbers. 10

SECTION – B

4. (a) Define addressing modes. Explain various addressing modes in 8086 microprocessor. 10

   (b) Explain PIN diagram of 8086 microprocessor. 10

5. (a) Explain instruction formats of 8086 microprocessor in detail. 15

   (b) What are flag manipulation instructions ? 5

SECTION – C

6. (a) Write a simple assembly Language program to add two memory locations where each memory Location is one byte wide. 10

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(b) Explain directives used in assembly Language program. Why are segment directives used ? 10

7. (a) Explain instruction execution timing with example. 10

(b) Explain NOP and HLT instructions with the help of suitable example. 10

SECTION – D

8. (a) Explain BSR and I/O modes of 8255 PPI chip. 10

(b) Explain PIN Diagram of 8237 DMA Controller. 10

9. Explain interfacing of 8255 programmable peripheral device with keyboard and seven segment display with the help of a program. 20