

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 02

B.Tech. (Sem. - 5th)

MICROPROCESSORS AND INTERFACING

SUBJECT CODE : EE - 307

Paper ID : [A0416]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

Section - A

Q1) (10 × 2 = 20)

- a) Compare MC6800 with 8085 in terms of accumulator?
- b) Explain the instruction SPHL in 8085?
- c) What is the purpose of extra segment register in 8086?
- d) Differentiate near jump from short jump in 8086?
- e) Describe the function at pin RQ/GT₁ in maximum mode in 8086?
- f) Which mode in 8254 is called hardware triggered strobe?
- g) What is fully nested priority mode in 8259A?
- h) What is conversion time in A/D converter
- i) What is purpose of 8x8 FIFO RAM in a programmable keyboard/display interface?
- j) Define assembler directives in 8086?

Section - B

(4 × 5 = 20)

Q2) What are the parameters on which selection of a particular microprocessor depends?

Q3) Discuss with example following instructions related to 8085:
XTHL, SPHL, DAD, JC, ADC

- Q4) What are assembler directives in 8086, discuss them with examples?
- Q5) Write an assembly language program in 8086 to add a 5 byte number in one array to a 5 byte number in another array. Put sum in another array. Put state of carry flag in byte 6 of the array that contains sum. The first value in each array is least significant byte of that number.
- Q6) Compare Macros with procedures in 8086?

Section - C

(2 × 10 = 20)

- Q7) Describe with block diagram how a logic analyzer used to observe microprocessor bus signals?
- Q8) Describe with block diagram operation of an 8254 programmable timer/counter and write instructions necessary to initialize an 8254 for a specified application.
- Q9) Describe with block diagram interfacing of ADC with 8086?

