Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 18

B.Tech (EE) PT (Sem.–5)

MICROPROCESSORS

Subject Code : BTEE-503

M.Code : 70556

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

Answer briefly :

1) Differentiate between instruction cycle and machine cycle.

2) Why stack is started at the top of the available memory?

3) The function of READY and ALE signals in 8085.

4) Comparison of LXI H, 3000H and LHLD 3000H.

5) Why 8254 chip is required? Explain.

6) What is DMA data transfer scheme? Explain.

7) Why the instructions HLT and NOP are used in microprocessors?

8) What is memory segmentation? Discuss.

9) Differentiate between Shift & Rotate Instructions in 8086.

10) Discuss the function of 8279 chip.

SECTION-B

11) Why flag register is required? Give the format of flag register in 8085, also discuss them.

12) An 8-bit binary number (e.g. 9FH) is stored in memory location XX50H.

Write a program using 8085 to :

a) Transfer the byte to the accumulator.

b) Separate the two nibbles (as 09 and 0F).

c) Call the subroutine to convert each nibble into ASCII Hex code.

d) Store the codes in memory locations XX60H and XX61H.

Also write a subroutine to convert a binary digit (0 to F) into ASCII hex code.

13) Discuss various addressing modes of 8086 microprocessor by considering suitable examples.

14) Discuss :

a) Need of stack and subroutine.

b) Comparison of 8085 and 8086 microprocessor.

15) Discuss in detail the interfacing of USART with 8085 microprocessor.

SECTION-C

16) Draw and explain in detail the architecture of 8085 microprocessor.

17) a) Describe the interface of a 20-key matrix keyboard using Port B and C of 8255 with the microprocessor.

b) Discuss the minimum mode of 8086 microprocessor.

18) Explain the following :

a) Interrupts of 8085

b) Microprocessor evolution and its types

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.