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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.