Roll No. Total No. of Pages : 02

**Total No. of Questions: 09** 

B.Tech (Electronics & Electrical Engg.) (2012 to 2019)

B.Tech.(EE) PT/(Electrical & Electronics Engg.) (2019 Onwards)

B.Tech (EE) (2019 Onwards)

(Sem.-5)

**MICROPROCESSORS** 

Subject Code: BTEE-503

M.Code: 70556

Time: 3 Hrs. Max. Marks: 60

#### **INSTRUCTION TO CANDIDATES:**

- 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

# 1. Answer briefly:

- a) Why Microprocessor, is required? Explain.
- b) Comparison of LXXH, 2000H and LHLD 2000H of 8085.
- c) The function of READY and ALE signals in 8085.
- d) Discuss the significance of subroutines.
- e) What do you mean by memory interfacing? Explain.
- f) Differentiate between shift logical right (SHR) and shift arithmetic right (SAR) instructions used in 8086 microprocessor.
- g) What is PSW? Explain.
- h) What is the significance of timing diagram? Explain.
- i) What is the function of 8254 chip? Explain.
- j) What do you mean by USART? Explain its function.

## **SECTION-B**

2. How many interrupts in 8085 microprocessor? Arrange them in ascending order of their priority and write short note on vectored and non-vectored interrupt.

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- 3. Draw a flow chart and write a program to count from 0 to 9 with a one second delay between each count. At the count of 9, the counter should reset itself to zero and repeat the sequence continuously. The clock frequency of the microcomputer is 1 MHz.
- 4. What is the function of addressing modes? Discuss various addressing modes of 8086 microprocessor giving at least two examples of each.
- 5. Differentiate between Minimum and Maximum mode. Write down the various characteristics of minimum mode.
- 6. List the different characteristics of 8255. Also write down the configuration of control word in I/O mode of 8255.

### **SECTION-C**

- 7. Discuss the following instructions w.r.t. 8085:
  - a) XTHL
  - b) PCHL
  - c) STC
  - d) NOP
  - e) HLT
  - f) SHLD
  - g) SIM
  - h) ANI 00H
  - i) XCHG
  - i) DAA
- 8. What is DMA data transfer scheme? Discuss the functions of DMA controller 8257 in detail.
- 9. a) Draw the flow chart and write a programme to add the content of the memory location 2000H:0500H to the contents of 3000H:0600H and store the result in 5000H:0700H.
  - b) Differentiate between Minimum and Maximum mode. Write down the various characteristics of minimum mode.

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.

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