

**IV-SEM ETC/CSE/IT/AEI/ELECT. & ETC/2019(W)**  
**ETT-402/CST-403/ITT-403/AIT-402 MICROPROCESSOR & ITS INTERFACING**

**Full Marks- 80**

**TIME- 3 Hour**

**Answer any FIVE questions including Q.1 and Q.2.**  
**Figure in the right hand margin indicates marks.**

**1. Answer ALL the questions.**

- a) Define Microprocessor & write any two of its application. [2X10]
- b) Define BUS and write down the different types of BUS.
- c) What is stack pointer and programme counter?
- d) What is assembler and write down the different types of assembler?
- e) Write down the different types of instruction sets in 8085 microprocessor.
- f) What is sub-routine?
- g) What is machine code?
- h) Define T-state in timing diagram.
- i) What is PPI and PIC ?
- j) Write down the addressing modes in 16 bit microprocessor.

**2. Answer any SIX of the followings questions**

**[5X6]**

- a) Briefly write down the evolution of microprocessor.
- b) Explain register and different types of register in 8085 microprocessor.
- c) What is addressing mode. Write down the different types of addressing mode of 8085 microprocessor with examples.
- d) Write a simple assembly programme for 1's complement and 2's complement.
- e) Explain the following(**any TWO**)
  - i. T-state
  - ii. Fetch cycle
  - iii. Machine cycle
  - iv. Instruction cycle
- f) Explain the functional block diagram of 8251 (USART).
- g) What are the instruction sets of 8086 microprocessor? Explain with proper examples.

**3. Draw and explain the basic block diagram and pin diagram of 8085 microprocessor. [ 10 ]**

**4. Write a programme to arrange numbers in ascending and descending order using sub-routine . [ 10 ]**

**5. Draw timing diagram of the followings [5X2]**

- i. LDA 2500 H instructions
- ii. I/O write machine cycle

**6. Draw and explain the block diagram and pin diagram of 8255 PPI . [10]**

**7. Draw the basic block diagram of 8086 microprocessor and explain the maximum and minimum mode of operation. [10]**