

Roll No. ....

**3227**

**B. Tech. (CSE) 5th Semester  
Examination – February, 2022**

**MICROPROCESSOR**

**Paper : ESC-CSE-301-G**

*Time : Three hours ]*

*[ Maximum Marks : 75*

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

*Note : Question No. 1 is compulsory. Attempt one question from each Unit.*

1. Describe following terms : 2.5 × 6 = 15

- (a) Opcode & operand
- (b) BSR mode
- (c) EU & BIU
- (d) Branching Instructions
- (e) PIC
- (f) Addressing Modes

### UNIT - I

2. (a) Give the basic block diagram of 8085 microprocessor. Explain the various registers of 8085 microprocessor. 10
- (b) Explain the following in brief, with respect to 8085: 5
- (i) XTHL
  - (ii) RIM
  - (iii) Program status word
  - (iv) RESET OUT
  - (v) TRAP
3. (a) Write an assembly language program to find the number of 1's in a given byte of data. 7
- (b) Explain the interrupt structure of 8085 microprocessor. 8

### UNIT - II

4. (a) State the features of 8086 ? Also explain the difference between microprocessor 8085 and 8086 ? 10
- (b) Differentiate between min and max mode of 8086 operation. 5
5. (a) Explain memory segmentation in 8086 with the help of block diagram. 8
- (b) Discuss various instruction formats used in 8086 microprocessor. 7

### UNIT - III

6. Explain following in 8086 microprocessors in detail.
- (a) Data Transfer Instructions 5
  - (b) Logical Instructions 5
  - (c) Looping Instructions 5
7. (a) What are various directives and operators used in 8086. 10
- (b) Describe various flag manipulation instructions in 8086. 5

### UNIT - IV

8. What are the applications of PPI ? Explain Block diagram & Pin diagram for PPI. 15
9. Explain the following in detail.
- (a) DMA 8
  - (b) Programmable Interval Timer 7