

Code: CS5T2

**III B.Tech - I Semester – Regular/Supplementary Examinations  
MARCH - 2021**

**MICROPROCESSOR AND INTERFACING  
(COMPUTER SCIENCE AND ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

**PART – A**

Answer *all* the questions. All questions carry equal marks

11x 2 = 22 M

1.

- a) What is the purpose of BIU & EU?
- b) What are the signals involved in memory bank selection in 8086 microprocessor?
- c) Define assembly language and machine language.
- d) Identify the addressing modes in the following instructions.
  - i) AND AL, BL
  - ii) SUB AL, 24H
  - iii) MOV AL, (BP)
  - iv) MOV CX, 1245H
- e) What are the functions performed by 8279?
- f) Give the BSR mode format of 8255.
- g) Define paging.
- h) What is meant by the 80486 BUS BACKOFF feature?
- i) What is meant by the statement, “The Pentium processor is based on a superscalar design”?
- j) What are the properties of multi core systems?

k) If (DS) = 205FH and OFFSET = 0052H, what is the 8086 physical address?

### PART – B

Answer any **THREE** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Explain what is the need and advantages of memory segmentation in 8086 Microprocessor. 8 M

b) Explain the Relative addressing mode and the implied addressing mode with syntax. Give an example. 8 M

3. a) Explain the following 8086 instructions.

i) CPM SB

ii) DIV BL

iii) LOOP

iv) XLAT

8 M

b) Write an 8086 assembly language program to find the area of a circle with radius 2 meters and save the result in AX.

8 M

4. a) Explain 8086 interrupt structure and its method of interfacing with 8086 microprocessor with a suitable example. 10 M

b) What are the modes used in keyboard display interface?

6 M

5. a) State the addressing modes of 80386. Give the various exceptions which occur when operating in the Protected Virtual addressing mode. 8 M
- b) What do mean by Translation Lookaside Buffer (TLB)? How does it help in the address calculation procedure? 8 M
6. a) State the function of the Branch prediction unit in Pentium processor. To what extent is the efficiency increased due to this unit? 8 M
- b) Describe briefly on the performance issues of multi-core processors. 8 M