

III B. Tech II Semester Regular/Supplementary Examinations, October/November - 2020
MICROPROCESSORS AND MICROCONTROLLERS

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)

2. Answer **ALL** the question in **Part-A**

3. Answer any **FOUR** Questions from **Part-B**

PART -A

(14 Marks)

1. a) Write any four differences between 80486 and 80386. [2M]
- b) Explain the NEAR and FAR assembler directives. [2M]
- c) Write short notes about DMA. [2M]
- d) Write short notes about the internal RAM of 8051. [3M]
- e) List out the various features of PIC18. [3M]
- f) Explain the bitwise operators in C used for PIC18. [2M]

PART -B

(56 Marks)

2. a) Briefly explain the various operations performed by BIU of 8086 and also list various registers used. [7M]
- b) Explain the memory organization of the Intel 80386 processor. [7M]
3. a) Explain the following instructions used with 8086 microprocessors: [7M]
 - i) MUL
 - ii) DIV
 - iii) IN
 - iv) PUSH.
- b) Draw the timing diagram for Read and Write operations of 8086 microprocessors. [7M]
4. a) Explain the architecture of 8259 PIC with the help of a neat diagram. [7M]
- b) Explain the architecture of 8255 PPI and its control register. [7M]
5. a) Explain the TMOD and TCON special function registers of 8051. [10M]
- b) Explain the operations supported by various ports in 8051. [4M]
6. Draw the block diagram of PIC18 and explain the various features. [14M]
7. a) Write a program to get a byte of data from Port C, wait for 1 second, and then send the same to Port B. [7M]
- b) Write a program to convert ASCII digits of '5' and '6' to packed BCD and display it on Port C. [7M]
