

Roll No.

3239

**B. Tech. 5th Sem. (EE)
Examination – March, 2021**

MICROPROCESSOR & MICROCONTROLLER

Paper : PCC-EE-309-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 : Attempt *five* questions in all, selecting *one* question from each Section. Question No. 1 is *compulsory*.

1. Explain the following :
- | | |
|-----------------------------------|-----|
| (a) Maximum Mode of 8086 | 2.5 |
| (b) USART | 2.5 |
| (c) Clocking | 2.5 |
| (d) Real Time Application of 8051 | 2.5 |
| (e) DAC | 2.5 |
| (f) D/A Interface | 2.5 |

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P. T. O.

SECTION – A

2. What do you mean by architecture ? Describe the architecture of 8086 processor along with its different features and memory interfacing. 15
3. How Instruction Set Works ? Explain the instruction set of 8086 microprocessor in detail. How many addressing modes are being used in this ? Explain. 15

SECTION – B

4. Explain the following peripheral devices in detail :
(a) Timer/Counter. 10
(b) DMA Controller. 5
5. Draw and describe the architecture of Interrupt Controller along with its pin diagram in detail. 15

SECTION – C

6. Discuss the following :
(a) Different Types of Microcontroller 8
(b) CISC Vs RISC. 7

7. What are the different features of microcontrollers ? Explain the following : 15
(a) Timers
(b) Peripherals
(c) I/O Pins

SECTION – D

8. What do you mean by interfacing ? Explain the interfacing of 8051 microcontroller with : 15
(a) LCD
(b) Key Board
9. Explain the following in 8051 microcontroller :
(a) Architecture 5
(b) Registers 5
(c) Addressing Modes 5