Hall Ticket Number :										

R-14

Code: 4G263

III B.Tech. II Semester Supplementary Examinations October 2020

Microprocessors and Microcontrollers

(Electrical and Electronics Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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UNIT–I

1. Explain the function of the following instructions with suitable examples.
   DAA, DAS, AAM, AAD, XLAT, AAS, RET

OR

2. With a neat sketch explain in detail the internal architecture of 8086 microprocessor.

UNIT–II

3. a) Explain the architecture of 8253 Programmable Interval Timer.
   b) Differentiate between memory mapped I/O and I/O mapped I/O.

OR

4. a) Draw and discuss the architecture of 8257 DMA controller?
   b) What is the advantage of DMA Controlled data transfer over interrupt driven data transfer?

UNIT–III

5. a) What is basic structure of SRAM and DRAM.?
   b) What is the need of DMA and explain it.

OR

6. a) Differentiate SRAM and DRAM.
   b) Explain the architecture of 8257.

UNIT–IV

7. a) Distinguish between synchronous and asynchronous data formats?
   b) With the help of flowchart, explain how synchronous serial data can be sent from a port line using software routine?

OR

8. Explain the block diagram and the functions of each block of the 8251 USART

UNIT–V

9. a) Explain the Addressing modes of 8051 microcontroller.
   b) Explain the function of stack pointer in 8051 microcontroller?

OR

10. a) Write and explain the differences of between microprocessors and microcontrollers
    b) List the features of ARM microcontrollers.

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