R16

Reg. No:

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech III Year II Semester Supplementary Examinations Dec 2019
MICROPROCESSORS & MICROCONTROLLERS
(EEE, ECE & CSE)

Time: 3 hours   Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	a	Name and explain different addressing modes used in 8085 using suitable examples.	7M
	b	Draw and explain the timing diagram of memory read cycle (MVI D, 11H) of the 8085 microprocessor.	5M

OR

2	a	Explain the various addressing modes of 8085 microprocessor with examples.	6M
	b	Discuss the different groups of instruction set of 8085 with suitable examples.	6M

UNIT-II

3	a	Write a ALP to perform 16-bit multiplication using 8086 Microprocessor.	6M
	b	Explain the external memory addressing in 8086.	6M

OR

4	a	Explain the assembler directives ASSUME, EQU, DW, and EVEN with suitable examples.	6M
	b	Explain stack operation of 8086 with an example.	6M

UNIT-III

5	a	Draw and explain the block diagram of 8051 microcontroller.	6M
	b	Discuss briefly the various registers in 8051 microcontroller.	6M

OR

6	a	List the major features 8051 microcontroller.	7M
	b	Write briefly about the operating modes for serial port of 8051 microcontroller.	5M

UNIT-IV

7	a	What are logical operations? Explain the logical Instructions of 8051 with an example.	8M
	b	What is an assembler? Explain the assembler directives of 8051 µC.	4M

OR

8	a	Write an ALP to perform two 2x2 matrices.	4M
	b	Explain various steps involved in the assembly language programming.	8M

UNIT-V

9	a	Explain the interfacing of 4×4 matrix keyboard to the 8051 microcontroller with neat diagram.	7M
	b	Design and explain any system based on 8051 microcontroller.	5M

OR

10	Design and explain schedule-based traffic light control system using 8051 microcontroller and write pseudo code to it.	12M

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