R16

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

Time: 3 hours   Max. Marks: 60

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

UNIT-I

1	a	Draw the internal architecture of 8085 microprocessor and explain its operation.	8M
	b	Draw and explain the flag register of 8085 microprocessor.	4M

OR

2	a	Explain the various addressing modes of 8085 microprocessor with examples.	7M
	b	What is meant by an instruction? Mention the instruction and data formats of 8085 μP.	5M

UNIT-II

3	a	Compare various features of the 80xxx processor family.	6M
	b	List out different assembler directives used in 8086 microprocessor with examples.	6M

OR

4	a	What is an interrupt? Explain various types of interrupts in 8086 microprocessor.	6M
	b	Explain the physical memory organization in an 8086 system.	6M

UNIT-III

5	a	Write an overview of 8051 microcontrollers.	6M
	b	Write a short note on the following i) Timers ii) Counters iii) Serial communication.	6M

OR

6	a	Describe briefly the register set of 8051 microcontroller.	7M
	b	Explain differences between microcontroller and microprocessor.	5M

UNIT-IV

7	a	Write a ALP to count the number of 1's and 0's in a given 8-bit number.	7M
	b	Explain Jump and call instructions of 8051 microcontroller with an example.	5M

OR

8	a	Write short notes on external interrupts in 8051 microcontroller.	6M
	b	What is an assembler? Explain the assembler directives of 8051 μC.	6M

UNIT-V

9	a	Write an ALP to print a string "HELLO" on 16x2 LCD Display.	7M
	b	Write notes on 8051 serial port programming.	5M

OR

10	a	Explain the need of Relays and Opto-couplers for interfacing peripheral devices to 8051 Microcontrollers?	7M
	b	Describe Key bouncing problem and de-bouncing solutions.	5M

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