Q.P. Code: 18EC0420 **R18**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech III Year II Semester Supplementary Examinations February-2022

MICROPROCESSORS AND MICROCONTROLLERS

(Common to EEE and ECE)

Time: 3 hours Max. Marks: 60

PART-A

(Answer all the Questions **5 x 2 = 10** Marks)

1	a	Calculate the address lines required for an 8 KB memory chip.	**2M**
	b	Define machine cycle and instruction cycle.	**2M**
	c	List out the 8051 μC five interrupts.	**2M**
	d	What is the role of NOP in 8051 μC.	**2M**
	e	Classify the seven segment displays.	**2M**

PART-B

(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

2	a	Define instruction and explain different type's instructions supported by μP.	**7M**
	b	Compare static RAM and Dynamic RAM.	**3M**
		OR	
3	a	Define microprocessor. Explain the brief history of evolution of μP.	**5M**
	b	Draw the block diagram of microcomputer and explain function of each block	**5M**

UNIT-II

4	a	List out the important features of 8085 microprocessor.	**5M**
	b	Sketch neat block diagram of 8085 microprocessor.	**5M**
		OR	
5	a	Explain what operation will take place when the following instructions are executed: i) RAL ii) RLC iii) DAD	**5M**
	b	Classify the register set in 8085μP.	**5M**

UNIT-III

6	a	Compare serial communication and parallel communication.	**5M**
	b	Explain how the 8051 μC transfers the data using serial port.	**5M**
		OR	
7	a	Draw the pin diagram of 8051 μC and describe the functionality of each pin in detail.	**7M**
	b	List the features of8051microcontroller.	**3M**

UNIT-IV

8	a	Mention various logical operations performed in assembly language.	**5M**
	b	Explain the logical Instructions of 8051 μC with an example.	**5M**
		OR	
9	a	Write an assembly program of 8051 μC to divide two 8-bit numbers and store the result in a memory location.	**5M**
	b	Explain the moving data instructions of 8051 μC with an example.	**5M**

UNIT-V

10	a	Define Interrupt and classify the interrupts.	**5M**
	b	Explain multiple interrupts present in8051μC.	**5M**
		OR	
11	a	List the features of 16X2LCDdisplay.	**5M**
	b	Draw and explain the pin Diagram of 16x2LCD display.	**5M**

END