O.P.Code: 20MC9101	R20	H.T.No.									

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

MCA I Year I Semester Regular & Supplementary Examinations January/ February-2025

COMPUTER ORGANIZATION

Time: 3 Hours **Max. Marks: 60**

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

UNIT-I

1		Convert the following: i). $(1011001)_2=(?)_{10}$ ii). $(160)_{10}=(?)_2$ iii). $(2980)_{10}=(?)_8$ iv). $(10110001101011)_2=(?)_{16}$ v). $(3971)_{10}=(?)_{16}$ vi). $(306.D)_{16}=(?)_2$	**CO1**	**L3**	**12M**
		OR			
2	**a**	Illustrate the Encoder in detail with Truth Table.	**CO1**	**L2**	**6M**
	b	Illustrate the Decoder in detail with Truth table.	**CO1**	**L2**	**6M**
		UNIT-II			
3	**a**	Discuss about the cache memory in detail.	**CO2**	**L3**	**6M**
	b	Differentiate the types of mappings.	**CO2**	**L3**	**6M**
		OR			
4		Discuss about Logic Micro Operations with neat representations.	**CO2**	**L3**	**12M**
		UNIT-III			
5	**a**	Explain about assembler directives.	**CO3**	**L2**	**6M**
	b	Explain about Data transfer instructions.	**CO3**	**L2**	**6M**
		OR			
6		Explain about Programming with assembly language instructions with example.	**CO3**	**L2**	**12M**
		UNIT-IV			
7	**a**	Compare memory mapped I/O and isolated I/O.	**CO4**	**L4**	**6M**
	b	Compare I/O and Memory bus	**CO4**	**L4**	**6M**
		OR			
8	**a**	Discuss the Programmed I/O in detail.	**CO4**	**L2**	**6M**
	b	Explain about Interrupt-initiated I/O in detail.	**CO4**	**L2**	**6M**
		UNIT-V			
9	**a**	Explain about Parallel Processing and its Types?	**CO5**	**L2**	**6M**
	b	Design the concept of Pipelining with clear example with neat sketch?	**CO5**	**L3**	**6M**
		OR			
10		Discriminate about Inter Process Communication and Synchronization in detail.	**CO5**	**L3**	**12M**

***** END *****