

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Convert the given numbers to their respective decimal and octal base. a. $123D_{16}$ b. 1010101_2 c. 140_8 to decimal alone.	K4	CO1
		(OR)		
	11.b.	Simplify the following Boolean expression: a. $xy + (xy)'z$ b. $wx + xy' + yz + xz'$ c. $(x + y + w)(w + x' + y)(y' + z)(w + z)$		
2	12.a.	Minimize the following Boolean expression using K-map $F(A,B,C) = A'BC + A'BC' + AB'C + AB'C$	K5	CO2
		(OR)		
	12.b.	Determine the sum of two numbers 5 and 9 with BCD adder. Construct a truth table for the same.		
3	13.a.	List the various arithmetic micro operations performed in registers.	K3	CO3
		(OR)		
	13.b.	Experiment with the register transfer operations on the data stored in the registers.		
4	14.a.	Analyze the concepts of stack organizations.	K4	CO4
		(OR)		
	14.b.	Explain in detail about various instruction formats.		
5	15.a.	Categorize the four popular types of Direct Memory Access (DMA) with respect to read and write operations.	K4	CO5
		(OR)		
	15.b.	List the three different types of mapping used for the purpose of cache memory.		

SECTION - C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Analyze the canonical and standard form of Boolean Function.	K4	CO1
2	17	Compare the working of multiplexer and demultiplexer in digital electronics.	K5	CO2
3	18	With an example, interpret the various methods and symbols of RTL.	K5	CO3
4	19	Explain in detail about the various types of addressing mode in computer organization.	K4	CO4
5	20	Examine memory hierarchy design and characteristics with a block diagram.	K4	CO5