

	b.	Perform the following : i) $(1010100)_2 - (1000100)_2$ using 2's compliment. ii) $(4456)_{10} - (34324)_{10}$ using 10's compliment method.	6	L3	CO3
	c.	State and prove De – Morgan's theorems with its truth table.	6	L2	CO3
OR					
Q.6	a.	Implement the Boolean functions using logic gates. i) $F_1 = x + y'z$ ii) $x'y'z + x'yz + xy'$	6	L3	CO3
	b.	Write the step by step procedure to design a combinational circuit.	6	L2	CO3
	c.	Implement full adder circuit with its truth table and draw the logic diagram of sum and carry.	8	L3	CO3
Module – 4					
Q.7	a.	What is an embedded system? Compare embedded system and General computing systems.	7	L2	CO4
	b.	Explain classification of embedded systems.	7	L2	CO4
	c.	What is the difference between RISC and CISC processors?	6	L2	CO4
OR					
Q.8	a.	Discuss major application areas of embedded systems with examples.	7	L2	CO4
	b.	Write short note on : i) Transducers ii) Sensors iii) Actuators.	6	L2	CO4
	c.	Write a short note on 7-segment LED display.	7	L2	CO4
Module – 5					
Q.9	a.	With neat block diagram, explain modern communication system.	8	L2	CO5
	b.	Write a note on Hard wired channel and soft wired channel.	6	L2	CO5
	c.	Explain with a neat diagram, the concept of Radio wave propagation and its different types.	6	L2	CO5
OR					
Q.10	a.	Explain Amplitude Modulation (AM) and Frequency Modulation (FM) with neat waveforms.	8	L2	CO5
	b.	List out the advantages of Digital communication over Analog communication.	6	L2	CO5
	c.	Explain different multiple Access Techniques.	6	L2	CO5
