CBCS SCHEME

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BESCK204C

Second Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025
Introduction to Electronics and Communication

Time: 3 hrs.   Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	With neat block diagram, explain the working of a DC power supply also mention the principal components used in each block.	10	L1	CO2
	b.	With neat circuit diagram and waveform, explain the working operation of a Bi-phase rectifier circuit.	10	L1	CO2
		OR			
Q.2	a.	Define feedback. What are the different types of feedback available, what are the advantages of negative feedback used in amplifier? Derive the overall gain for negative feed back.	10	L2	CO3
	b.	Define amplifier, what are the different types of amplifier used in real time.	10	L1	CO2
		Module – 2			
Q.3	a.	What is an oscillator and what are the conditions to be satisfied for a device to work as an oscillator.	10	L1	CO2
	b.	With neat diagram and waveform explain the working of RC phase shift oscillator.	10	L1	CO3
		OR			
Q.4	a.	Explain the concept of openloop voltage gain input and output resistance, input offset voltage and slew rate of op-amp with relevant diagram.	10	L1	CO2
	b.	What is a operation amplifier? What are the op-amp characteristics in real time?	10	L1	CO2
		Module – 3			
Q.5	a.	Design the AND, OR, NOT gate with the help of truth table.	8	L1	CO2
	b.	Using 10 complement subtract 72532-3250.	4	L1	CO1
	c.	Given two binary number X = 1010100 and Y = 1000011 perform the subtraction i) X-Y ii) Y-Y using 2's complement.	8	L2	CO2

		OR			
Q.6	a.	Express the Boolean F = A + B′C in a sum of minterms and G = xy + x′z in a product of maxterms.	10	L2	CO2
	b.	Design a half adder by constructing the truth table and simplify the output equations.	10	L1	CO2
		Module – 4			
Q.7	a.	i) Write any 5 differences between RISC and CISC processor. ii) Write any 5 differences between Microprocessor and Microcontroller.	10	L2	CO3
	b.	Write the differences between embedded system vs general computing system.	10	L2	CO2
		OR			
Q.8	a.	With neat diagram, explain the major elements of embedded system.	10	L1	CO2
	b.	Define embedded system and explain the classification of embedded system.	10	L1	CO2
		Module – 5			
Q.9	a.	With neat diagram, explain the basic blocks used in communication system.	10	L1	CO2
	b.	What are the advantages and disadvantages of digital communication over analog communication?	10	L1	CO2
		OR			
Q.10	a.	Explain the types of communication system available with neat diagram.	10	L1	CO2
	b.	Explain the need for modulation and explain briefly the types of modulation techniques used for communication.	10	L1	CO1

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