CBCS SCHEME

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BEC/BTE/BVL654B

ACHARYA INSTITUTE OF TECHNOLOGY MCA Library Date BANGALORE

Sixth Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026

Consumer Electronics

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.	What is Microphone? Explain the principle, construction and working of a moving coil microphone with a neat diagram.	10	L2	CO1
	b.	Explain the principle, construction and working of a carbon microphone and list the features.	10	L2	CO1
		OR			
Q.2	a.	Explain the working principle of a condenser type microphone.	05	L1	CO1
	b.	The plate of a condenser microphone have a diameter of 10 cm. The separation varies from 0.002 cm to 0.005 cm. Find the capacitance for the two positions.	05	L3	CO1
	c.	Explain the working principle of an horn loudspeaker with a neat diagram.	10	L2	CO1
		Module – 2			
Q.3	a.	Explain the modulation of laser beam in optical recording of a compact disc with a neat diagram.	10	L2	CO2
	b.	Explain the pickup system of playback process in a CD player with a neat diagram.	10	L2	CO2
		OR			
Q.4	a.	Explain the encoding process of error correction in a compact disc.	10	L2	CO2
	b.	Draw an R – 2R ladder network and the process of D/A conversion with relevant equations.	10	L2	CO2
		Module – 3			
Q.5	a.	What are primary colours? Explain the trichromatic co-efficient and colour triangle with a schematic diagram.	10	L2	CO3
	b.	Explain the chromaticity diagram with related specifications.	10	L2,3	CO3
		OR			
Q.6	a.	Compare the process of additive mixing and subtractive mixing of colours with neat diagrams.	10	L2	CO3
	b.	Define Television. Explain the working of a digital television with neat block diagram and list the features.	10	L2	CO3
		Module – 4			
Q.7	a.	Explain the working of CCTV system with a neat block diagram.	10	L1,2	CO4
	b.	Explain the principle and working of a digital switch with a neat block diagram.	10	L2	CO4
		OR			
Q.8	a.	Explain the Cable Television Network with a neat block diagram.	10	L2	CO4
	b.	Draw and explain the architecture of a calculator with a neat diagram.	10	L2	CO4

		Module – 5			
Q.9	**a.**	Explain the working of a mobile phone with a neat block diagram.	**10**	**L2**	**CO5**
	b.	Explain the working principle and function of a remote control for TV and VCR with a neat diagram.	**10**	**L2**	**CO5**
		OR			
Q.10	**a.**	What is UPS? Explain the working of UPS and Inverter with neat diagrams.	**10**	**L2**	**CO5**
	b.	Explain the organization of a digital computer with a neat diagram.	**10**	**L2**	**CO5**

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