23ECOE321

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

(A Unit of Rajalaxmi Education Trust®, Mangalore)
Autonomous Institute affiliated to VTU, Belagavi, Approved by AICTE, New Delhi
Accredited by NAAC with A+ Grade & ISO 9001:2015 Certified Institution

Model Question Paper

Sixth Semester BE Degree Examination

Consumer Electronics

Time: 3 Hours **Max. Marks: 100**

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

		Module -1	M	L	C
Q1	a.	Explain the characteristics of sound signals such as intensity, loudness, and pitch.	6	L2	CO1
	b.	Describe the importance of frequency response and fidelity in audio systems.	6	L2	CO1
	c.	Explain the concepts of sensitivity and selectivity with reference to sound reproduction systems.	8	L2	CO1
		OR			
Q2	a.	Describe the differences between mono, stereo, and quadraphonic audio systems.	6	L2	CO1
	b.	Explain the working principle of electret microphone with neat diagram.	6	L2	CO1
	c.	Describe the block diagram of a Public Address (PA) system and explain the function of each block.	8	L2	CO1
		Module- 2			
Q3	a.	Explain the basic principle of television operation with reference to image formation.	06	L2	CO1
	b.	Describe the need for scanning and synchronization in television systems.	06	L2	CO1
	c.	A consumer wants to choose a display system for a home theatre, a computer lab, and for a public information display. Analyze and justify the suitability of CRT, LCD, LED, and Plasma technologies in terms of picture quality, power consumption, and applications.	08	L4	CO2
		OR			
Q4	a.	Explain the working principle of CRT display technology	06	L2	CO1
	b.	Describe the features and significance of Digital Television (DTV) and High-Definition Television (HDTV).	06	L2	CO1
	c.	A media archiving center is planning to shift from VCR-based recording to modern digital recording systems. Analyze the differences between analog video recording systems (VCR) and digital recording devices with respect to storage capacity, signal quality, and reliability, and justify the transition.	08	L4	CO2
		Module - 3			
Q5	a.	Illustrate the working of a landline telephone system using a suitable block diagram.	07	L3	CO3
	b.	Show the operation of a Fax machine for transmitting a document from sender to receiver with neat block diagram.	06	L3	CO3
	c.	Illustrate the working of a Smart Television and explain how its features are used in real-time applications.	07	L3	CO4
		OR			

Q6	a.	Show how a modem and router are used together to provide internet connectivity in a home or office network.	07	L3	CO3
	b.	Illustrate the process of printing and scanning a document using a printer–scanner setup.	06	L3	CO3
	c.	Show how the mobile communication system operates using a block diagram.	07	L3	CO4
Module - 4					
Q7	a.	Illustrate the working principle of a microwave oven using a neat block diagram and explain how food is heated.	10	L3	CO3
	b.	Show how an induction stove operates by converting electrical energy into heat.	10	L3	CO3
OR					
Q8	a.	Illustrate the refrigeration cycle of a refrigerator and explain the role of each major component.	10	L3	CO3
	b.	Apply the working principle of a washing machine to explain the sequence of operations during a complete wash cycle.	10	L3	CO3
Module - 5					
Q9	a.	Apply the working principle of a digital camera to explain image and video capture and storage	10	L3	CO4
	b.	Illustrate the basic architecture of a gaming console and explain how user input is processed and displayed as graphics.	10	L3	CO4
OR					
Q10	a.	Illustrate how IoT-enabled smart home devices operate and explain their role in home automation.	10	L3	CO4
	b.	Show how a smart watch enables health monitoring features such as heart rate and activity tracking with neat block diagram.	10	L3	CO4

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