B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2025

Sixth Semester

Electrical and Electronics Engineering

20EEEL609 - DIGITAL CONSUMER TECHNOLOGY

Regulations - 2020

Duration: 3 Hours   Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)
Answer ALL Questions

		Marks	K–Level	CO
1.	What is digitization?	1	K1	CO1
	(a) Conversion of analog to digital data (b) Increasing internet speed			
	(c) Using AI in consumer products (d) Creating software for devices			
2.	Which method is a quantitative market forecasting approach?	1	K1	CO1
	(a) Delphi method (b) Regression analysis (c) Market research surveys (d) Focus groups			
3.	Which of the following is a type of microphone?	1	K1	CO2
	(a) Dynamic microphone (b) Plasma microphone			
	(c) Fiber-optic microphone (d) Ultrasonic microphone			
4.	What is the main function of a microphone?	1	K1	CO2
	(a) Convert sound waves into electrical signals			
	(b) Convert electrical signals into sound waves			
	(c) Store audio signals			
	(d) Enhance video quality			
5.	Which display uses ionized gas cells?	1	K1	CO3
	(a) Plasma (b) LCD (c) LED (d) DLP			
6.	What does LED stand for?	1	K1	CO3
	(a) Light Electron Display (b) Light Emitting Diode			
	(c) Liquid Emission Device (d) Laser Emitting Diode			
7.	Which of the following is a digital device used for reading eBooks?	1	K1	CO4
	(a) Typewriter (b) Smartphone (c) Photocopier (d) Projector			
8.	Which printer type is best for bulk document printing?	1	K1	CO4
	(a) Inkjet (b) Dot Matrix (c) Laser (d) 3D			
9.	Which device allows handwriting input on a screen?	1	K1	CO5
	(a) Keyboard (b) Touchpad (c) Digital Notepad (d) Mouse			
10.	What device is commonly used in vehicle tracking systems?	1	K1	CO6
	(a) Thermostat (b) GPS (c) USB (d) Joystick			

PART - B (12 × 2 = 24 Marks)
Answer ALL Questions

		Marks	K–Level	CO
11.	State the importance of digitization in consumer products.	2	K1	CO1
12.	Contrast the Pre-Digital Era and Early Digital Era in consumer products.	2	K2	CO1
13.	Define a microphone.	2	K1	CO2
14.	List the components of a dynamic loudspeaker.	2	K1	CO2
15.	Define LED video display and mention two features.	2	K1	CO3
16.	List any two advantages of LCD displays.	2	K1	CO3
17.	List any two types of printers and their features.	2	K1	CO4
18.	Compare DVD-R and DVD-RW.	2	K2	CO4
19.	What is Net TV? Mention two features	2	K1	CO5

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create   **13509**

20.	List two advantages of lighting control systems.	2	K1	CO5
21.	Illustrate how GPS enhances vehicle security systems.	2	K2	CO6
22.	Outline the function of routers in home networking systems.	2	K2	CO6

PART - C (6 × 11 = 66 Marks)
Answer ALL Questions

| 23. | a) | Illustrate the key technologies used in digitization with relevant examples. | 11 | K2 | CO1 |

OR

| | b) | Outline the development of home networking and the technologies used. | 11 | K2 | CO1 |

| 24. | a) | Illustrate the construction and working principle of a dynamic microphone with a neat diagram. | 11 | K2 | CO2 |

OR

| | b) | Explain the working of MP3 compression with reference to psychoacoustic modeling and Huffman coding. | 11 | K2 | CO2 |

| 25. | a) | Explain the working of LED, LCD and Plasma display panels and list its merits and demerits. | 11 | K2 | CO3 |

OR

| | b) | Show the block diagram and working of a digital camcorder with a neat diagram. | 11 | K2 | CO3 |

| 26. | a) | Compare the features, advantages and limitations of eBooks and printed books. | 11 | K2 | CO4 |

OR

| | b) | Explain the role of smart phone in modern life and challenges associated with them. | 11 | K2 | CO4 |

| 27. | a) | Summarize the concept of Net TV and its role in modern entertainment. | 11 | K2 | CO5 |

OR

| | b) | Illustrate lighting control and home control systems with suitable examples. | 11 | K2 | CO5 |

| 28. | a) | Discuss the concept of smart transportation with its benefits and challenges. | 11 | K2 | CO6 |

OR

| | b) | Summarize the basic architecture and applications of PLCs in the transportation industry. | 11 | K2 | CO6 |