Reg. No.																

Question Paper Code	14577

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2026

Sixth Semester

Electrical and Electronics Engineering

20EEEL609 - DIGITAL CONSUMER TECHNOLOGY

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART – A (i) (MCQ)
(16 × 1 = 16 Marks)
Answer ALL Questions

		Marks	K – Level	CO
1.	What is the primary purpose of digitization in consumer products?	1	K1	CO1
	a) Increase product weight b) Convert analog information into digital form			
	c) Reduce electricity completely d) Remove networking features			
2.	Which of the following is an example of home networking?	1	K2	CO1
	a) Typewriter connection b) Smart TV connected through Wi-Fi			
	c) Mechanical radio d) Analog camera			
3.	Which factor is considered a major market driver for digital consumer devices?	1	K3	CO1
	a) Low internet usage b) Technological advancement			
	c) Decline in communication d) Manual operations			
4.	------ component of a loudspeaker vibrates to produce sound	1	K1	CO2
	a) Diode b) diaphragm			
	c) Transformer d) Capacitor			
5.	MP3 is mainly used for:	1	K3	CO2
	a) Video editing b) Audio compression			
	c) Image processing d) Network security			
6.	HDTV provides	1	K3	CO2
	a) Lower picture quality b) High-definition picture quality			
	c) Black and white images d) Audio-only transmission			
7.	Plasma display panels are mainly used for:	1	K3	CO3
	a) Audio recording b) Large screen displays			
	c) Data scanning d) Networking			
8.	LCD technology mainly uses:	1	K1	CO3
	a) Liquid crystals b) Gas plasma			
	c) Vacuum tubes d) Mechanical circuits			
9.	Digital camcorders are used for:	1	K2	CO3
	a) Audio compression b) Recording digital video			
	c) Wireless charging d) Data encryption			
10.	Smart card readers are mainly used for:	1	K3	CO4
	a) Audio recording b) Authentication and data access			
	c) Video editing d) Gaming			

11.	Smart phones are an example of:		*1*	*K1*	*CO4*
	a) Analog devices	b) Digital mobile communication devices			
	c) Mechanical devices	d) Printing devices			
12.	One major benefit of ebooks is:		*1*	*K2*	*CO4*
	a) Increased paper usage	b) Portability and easy access			
	c) Higher storage space requirement	d) Manual editing only			
13.	------ is the Cross Writer Digital Pen transmit handwriting data to the digital notepad.		*1*	*K1*	*CO5*
	a) Through a Bluetooth connection	b) By using a radio-frequency transmitter			
	c) Through infrared signals	d) By using a pressure-sensitive touch mechanism			
14.	Net TV mainly provides:		*1*	*K2*	*CO5*
	a) Internet-enabled television services	b) Audio recording only			
	c) Printing services	d) Offline gaming only			
15.	Energy management systems are mainly used for:		*1*	*K2*	*CO5*
	a) Increasing power wastage	b) Monitoring and controlling energy usage			
	c) Printing electricity bills	d) Audio enhancement			
16.	Home security systems help in:		*1*	*K3*	*CO5*
	a) Cooking automation	b) Protection and surveillance			
	c) Data printing	d) Image editing			

PART – A (ii) (Short Answer Questions)
(8 × 3 = 24 Marks)
Answer ALL Questions

17.	Choose the major market drivers influencing digital consumer devices.	*3*	*K3*	*CO1*
18.	Select any three market drivers and explain their influence on the development of digital consumer devices.	*3*	*K3*	*CO1*
19.	Compare the SDTV and HDTV technologies.	*3*	*K4*	*CO2*
20.	Choose the aspect ratio used for scanning the images in television.	*3*	*K3*	*CO2*
21.	Organize the different Internet audio formats based on quality, compression technique, and applications.	*3*	*K3*	*CO3*
22.	Apply the concept of laser technology used for laser printer.	*3*	*K3*	*CO4*
23.	Compare contact and contactless smart cards.	*3*	*K4*	*CO4*
24.	List the key features of Net TV used for digitization products.	*3*	*K4*	*CO5*

PART - B (Descriptive Answer Questions)
(5 × 12 = 60 Marks)
Answer ALL Questions

25.	a)	Develop the era of digital consumer devices to explain the success factors and challenges in the global consumer electronics market.	*12*	*K3*	*CO1*
		OR			
	b)	Utilize the concepts of consumer behavior and explain the process of consumer with its importance in digital marketing.	*12*	*K3*	*CO1*
26.	a)	Classify the various microphones used for digital audio system and explain the working principle of dynamic microphone.	*12*	*K4*	*CO2*
		OR			

	b)	Utilize the principle of digital audio systems and explain the block diagram of HDTV compare with SDTV to list the advantages and disadvantages.	*12*	*K4*	*CO2*
27.	a)	Compare LCD, Plasma, and Field Emission Displays.	*12*	*K4*	*CO3*
		OR			
	b)	Analyze the principle used in digital displays and explain the Digital Light Processor with its features.	*12*	*K4*	*CO3*
28.	a)	Apply the digitization concepts used in smart card readers with neat block diagram and explain the role in real-life applications such as banking and security systems.	*12*	*K3*	*CO4*
		OR			
	b)	Make use of the digitization concepts in DVDs and explain the working principles with neat diagram, types and applications.	*12*	*K3*	*CO4*
29.	a)	Examine the Net TV can be used in modern entertainment systems with neat block diagram and explain its practical benefits in daily life.	*12*	*K4*	*CO5*
		OR			
	b)	Analyze the recent emerging consumer devices and explain the applications of digital devices used in smart homes that include the lighting control and home security.	*12*	*K4*	*CO5*