CBCS SCHEME

USN

BEC/BTE613A

Sixth Semester B.E./B.Tech. Degree Examination, June/July 2025
Multimedia 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.	Explain broadcast television network and ISDN.	10	L2	CO1
	b.	Explain Interactive television application for both cable and satellite network.	10	L2	CO1
		OR			
Q.2	a.	With a neat diagram, explain the modes of communication.	10	L2	CO1
	b.	Determine the propogation delay associated with the following communication channel: i) Connection through private telephone network of 1km. ii) Connection through a PSTN of 200 km iii) Connection over a satellite channel 5000km. Assume velocity of propogation of a signal in case of : (i) and (ii) 2×10^8 m/Sec (iii) 3×10^8m/sec.	10	L3	CO1
		Module – 2			
Q.3	a.	With an example, explain different types of text representation in multimedia.	10	L2	CO2
	b.	Explain Raster Scan principle with neat schematic diagram for both television and computer.	10	L3	CO2
		OR			
Q.4	a.	Derive the time to transmit the following digitized image at both 64 kbps and 1.5 Mbps: i) $640 \times 480 \times 8$ – VGA compatible image ii) $1024 \times 768 \times 24$ – SVGA compatible image.	10	L2	CO2
	b.	Explain the detailed block diagram of Digital Camera and Scanner.	10	L2	CO2
		Module – 3			
Q.5	a.	How the Coding Operation takes place in arithmetic Coding? Consider the transmission of a message comprising string of characters with probabilities. e = 0.3, n = 0.3, t = 0.2, w = 0.1, • = 0.1 the word needed to be transmitted is Went.	10	L2	CO3
	b.	Explain JPEG encoding technique.	10	L2	CO3
		OR			
Q.6	a.	Explain the concept of run-length coding and statistical coding.	10	L2	CO3
	b.	Explain GIF and TIFF format.	10	L2	CO3

		Module – 4			
Q.7	a.	Explain the working principle of DPCM.	10	L2	CO4
	b.	With example frame sequences. Explain the meaning of the following type compressed frame and the reasons for their use: i) I – frame ii) P – frame iii) B – frame	10	L2	CO4
		OR			
Q.8	a.	With a neat diagram, explain H.261 video encoder principle.	10	L2	CO4
	b.	Explain the coding principles of MPEG – 4.	10	L2	CO4
		Module – 5			
Q.9	a.	Explain the principles of Hub Configuration.	10	L2	CO5
	b.	Explain the frame format and operation parameters of Ethernet/ IEEE 802.3.	10	L2	CO5
		OR			
Q.10	a.	Explain token Ring principle.	10	L2	CO5
	b.	Write a short note on FDDI network components.	10	L2	CO5

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