



# CBCS SCHEME

18EC743

## Seventh Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026 Multimedia Communication

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. Make use of the design of a Signal Encoder used in analog to digital converters with the necessary diagram and waveforms. (10 Marks)
- b. Explain the working principle of packet mode of operation of multimedia networks. List its salient features. (10 Marks)

OR

- 2 a. Calculate the maximum block size that should be used over a channel which has mean BER probability of  $10^{-4}$  if the probability of a block containing one error and hence discarded is to be  $10^{-1}$ . (06 Marks)
- b. Explain the operational points of multipoint conferencing. (08 Marks)
- c. Identify the situation of movie on demand and near movie on demand can be used. (06 Marks)

### Module-2

- 3 a. Explain the types of texts and explain the hypertext that enables integrated set of documents. (10 Marks)
- b. Explain the raster scan diagram and explain the operation associated with TV/Computer monitor in detail. (10 Marks)

OR

- 4 a. Explain the digital camera and scanners with necessary diagrams. (10 Marks)
- b. Write short note on synthesized audio with suitable diagram. (10 Marks)

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### Module-3

- 5 a. Explain the features of (i) GIF (ii) TIFF (10 Marks)
- b. Encode the string "WENT", comprising characters with the following probabilities:  
 $E = 0.3$ ,  $N = 0.3$ ,  $T = 0.2$ ,  $W = 0.1$ ,  $\cdot = 0.1$ , using Arithmetic coding. (10 Marks)

OR

- 6 a. Explain Lempel-Ziv-Wash (LZW) algorithm, with an example. (10 Marks)
- b. Explain the Resource Reservation Protocol (RSVP). (10 Marks)

### Module-4

- 7 a. With a neat diagram explain ADPCM subband encoder and decoder. (10 Marks)
- b. Explain LPC encoder and decoder with neat diagrams. (10 Marks)

OR

- 8 a. Explain H.263 error tracking with necessary diagrams. (10 Marks)
- b. Make use of neat diagram, explain Frequency masking and Temporal masking as applicable to auditory perception. (10 Marks)

### Module-5

- 9 a. Briefly describe the operation of IP datagram with the appropriate diagrams. (10 Marks)
- b. Explain the procedures followed in fragmentation and reassembly in IP protocols. (10 Marks)

OR

- 10 a. Describe the operation of ARP and RARP with necessary diagrams. (10 Marks)
- b. Briefly explain IP datagram with a neat diagram. (10 Marks)

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