



CBCS SCHEME

18SCN21

Second Semester M.Tech. Degree Examination, June/July 2019

Multimedia Communications

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. What is network QoS and application QoS? Explain the performance of circuit switched network and packet switches network with respect to QoS. (10 Marks)
- b. Explain Raster scan principles with respect to television/color monitors in detail. (10 Marks)

OR

- 2 a. What do you mean by digitization? Discuss in detail about encoder design and quantization interval of digitization. (10 Marks)
- b. Illustrate the working of PCM speech technique carried out for audio digitization with neat diagram. (10 Marks)

Module-2

- 3 a. Encode the following using static Huffman coding and construct the tree.
 $A = 0.25$ $B = 0.25$ $C = 0.14$ $D = 0.14$ $E = 0.055$ $F = 0.055$ $G = 0.055$ $H = 0.055$. (08 Marks)
- b. Draw the neat diagram of JPEG encoder and explain the process of DCT and quantization in detail. (12 Marks)

OR

- 4 a. Explain the principle operation of LZW compression algorithm with suitable example. (10 Marks)
- b. Discuss in detail about entropy encoding methods of JPEG. (10 Marks)

Module-3

- 5 a. Briefly explain the working of adaptive differential PCM subband encoder and decoder with neat diagram. (10 Marks)
- b. Explain MPEG perceptual coder schematic with suitable diagram. (10 Marks)

OR

- 6 a. How Dolby audio coder works? Explain in with a diagram. (10 Marks)
- b. How to compress a video? Brief the basic idea of motion estimation and compensation. (10 Marks)

Module-4

- 7 a. With neat diagram explain the VOP encoder schematic in detail. (10 Marks)
- b. Draw and explain MPEG - 1 video bitstream structure format. (10 Marks)

OR

- 8 a. Explain macroblock, frame format and GOB structure of H-261 encoder. (10 Marks)
- b. What is reversible VLC? Explain it with a suitable example. (10 Marks)

Module-5

- 9 a. Explain synchronization reference model in detail. (10 Marks)
- b. Discuss live synchronization with intermediate long term storage in detail. (10 Marks)

OR

- 10 a. Explain the components and phases of video data transmission. (10 Marks)
- b. Explain real time system model and characteristics of periodic tasks. (10 Marks)

* * * * *

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.