Roll No. ..... Total Pages : 2

BT-8/M-20 **38012**

MULTIMEDIA COMMUNICATIONS

Paper–ECE-406E

Option–2

Time Allowed : 3 Hours] [Maximum Marks : 100

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

UNIT–I

1. (a) Explain any two multimedia networks in detail. 10

   (b) Differentiate between MOD and NMOD. 10

2. Explain the following terms in multimedia communication : 20

   (a) Aspect ratio.

   (b) 4:2:2 format.

   (c) Quantization interval.

   (d) Audio synthesizer.

UNIT–II

3. (a) Code the given string "AAABBCCAAADDAAACDB" using Huffman coding. Derive the Huffman code tree. Determine the savings in transmission bandwidth over normal ASCII coding. 10

(b) Explain various compression principles. 10

4. Differentiate between GIF and TIFF. Explain in detail the role of DCT and Quantization in JPEG encoder. Also draw its block diagram. 20

UNIT–III

5. (a) With the help of neat diagrams explain LPC encoders and decoders. 10

(b) Describe third order predictive DPCM signal encoder and decoder. 10

6. With the help of block diagrams of P and B frames in video compression explain motion estimation and motion compensation. 20

UNIT–IV

7. What is Internet Telephony ? Explain the various protocols associated with it in detail. 20

8. Write short notes on the following :

(a) Electronic mail message.

(b) DNS. 20