

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

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**P. T. O.**

- (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