

( 3 Hours )

( Total Marks : 80 )

**N.B.:** (1) Question No.1 is compulsory.

(2) Attempt any three questions from the remaining five questions.

(3) Draw neat diagrams wherever necessary.

1. Differentiate :

[20]

- a) Multimedia Database and Normal Database.
- b) Printer and Scanner
- c) RTF and TIFF File formats.
- d) Types of video signals.

2. (a) Give the silent features of different types of Images. What will be the size of digital image if image specification is 800×600 pixels with 8-bit gray level?

[10]

(b) Discuss the characteristics of sound wave. Illustrate the steps to digitize audio data.

[10]

3. (a) What are the different types of redundancies present in an image? For the phrase “Mississippi river”, with each letter will taking 8 bits. Apply Huffman Coding Compression technique and find reduction achieved.

[10]

(b) Differentiate the different audio compression techniques. Justify DPCM performs better compression than PCM with suitable example.

[10]

4. (a) Explain MPEG Video Compression Technique.

[10]

(b) Why quality of service is important in network communication for multimedia data. Discuss the protocols to achieve the quality.

[10]

5. (a) Chart the navigation through an application for editing a hypermedia mail message. What menu items are required for this application?

[10]

(b) Discuss the importance of steganography. Explain the working of LSB with an example.

[10]

6. Write Short Note on Any Two :

[20]

- a) JPEG Compression
- b) RTP
- c) Digital Signature