## ELEMENTS OF MULTIMEDIA

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer question No. 1 and any *four* from the rest.

1. Answer the following short questions :     5×2=10

   (a) What do you mean by perception of human eye ?

   (b) Define the term cropping.

   (c) State the meaning of psycho-acoustics.

   (d) What is luminance ?

   (e) What is lossless compression ?

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2. (a) Name the software products which are used as part of multimedia. 5

   (b) Analyse the need of multimedia. 5

   (c) Explain digital representation of sound using PCM. 5

3. (a) Describe one lossy image compression scheme. 5

   (b) Write the basics of acoustics with reference to multimedia. 5

   (c) What is sampling ? Define the Nyquist theorem. 2+3=5

4. (a) Define the following terms : 4×2=8

   (i) Hue   (ii) Saturation   (iii) Scaling   (iv) Rotation

   (b) Describe the process of image capturing with the help of scanner. 7

5. (a) Illustrate all the TV broadcast standards. 9

   (b) Describe the monochrome and colour video concept. 6

6. (a) Define the terms : 5

    (i) Microphone

    (ii) Noise

  (b) Describe one process of audio compression. 5

  (c) Explain any one process of video compression. 5

7. Write short notes on any *three* : 3×5=15

  (a) Multimedia applications

  (b) Color printer

  (c) Digital representation of sound–ADC

  (d) Digital still camera.