

Total No. of printed pages = 3

Co-404/EOM/4th Sem/2013/M

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 *five* from the rest.

1. Answer the following short questions : $5 \times 2 = 10$

(a) Define multimedia.

(b) What do you understand by psycho-acoustics?

(c) Mention the unit of sound loudness level.

(d) Explain the perception of human eye.

(e) How many different colours can be represented by a 16 bit image ?

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2. Define the following terms : $4 \times 3 = 12$

- (a) ADC of sound
- (b) DAC of sound
- (c) Colour depth
- (d) JPEG compression.

3. (a) Describe the colour characteristic-Hue, Saturation and Luminance. 6

(b) Explain the image manipulation techniques-scaling, cropping and rotation. 6

4. Compare : $3 \times 4 = 12$

(a) Digital audio and MIDI sound.

(b) Vector and Raster graphics.

(c) Component and Composite video.

5. (a) Explain the lossless and lossy image compression techniques. 8

(b) Illustrate the working of an amplifier. 4

6. (a) Write the working principle of a digital still camera.

(b) Illustrate the video file formats. $6 + 6 = 12$

7. Illustrate the following TV broadcast standards : $3 \times 4 = 12$

(a) PAL

(b) NTSC

(c) SECAM.

8. Write short notes on any *three* : $3 \times 4 = 12$

(a) Role of multimedia.

(b) Colour printer.

(c) Audio compression.

(d) Digital audio format.