

DSE-A-4

(Multimedia and Its Applications)

Full Marks : 50

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

1. Answer *any five* questions : 2×5
- (a) What is Hypermedia?
 - (b) Mention the uses of CCD.
 - (c) Define dithering.
 - (d) What does audio resolution determine?
 - (e) A monitor can display 4 shades of Red, 8 shades of Blue and 16 shades of Green. What is the color depth supported by the monitor?
 - (f) A wave of frequency 100 Hz has wavelength 320 cm. Find its velocity.
 - (g) What is TIFF?
 - (h) State the function of chroma keys.
2. (a) Define Multimedia Server.
(b) Describe their roles. 2+8
3. (a) Explain the standard JPEG compression technique.
(b) Detail out the features of good image editing tools. 5+5
4. (a) What is Digital Audio? How is it sampled?
(b) An audio signal of frequency F is recorded on a computer stereo mode such that its data rate becomes R KB/sec. Find the bit depth using which it is recorded. (2+5)+3
5. (a) Why is video compression essential in multimedia?
(b) A 15 inch monitor having aspect ratio 9 : 5 has 1080 pixels along a row and refresh rate of 60 Hz. What is the horizontal scan rate?
(c) Name any two multimedia QoS parameters. 5+3+2
6. (a) Describe in detail, the four basic stages of Multimedia project.
(b) What is entropy? 8+2

7. (a) Discuss lossless and lossy text compression techniques.
(b) What are Kerning and Leading? 8+2
8. (a) Explain with examples any four features of animation needed for smooth animation.
(b) A monitor can display R shades of Red, G shades of Green, B shades of Blue. Show that color depth supported by the monitor is $(\log_2 R + \log_2 G + \log_2 B)$. (2×4)+2
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