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END SEMESTER EXAMINATION, NOVEMBER- 2018

Semester – 3rd

Subject Code : Co-302

ELEMENTS OF MULTIMEDIA

Full Marks – 70

Time – Three hours

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

Instructions :

1. *All* questions of PART-A are compulsory.
2. Answer any *five* questions from PART-B.

PART – A

Marks – 25

1. Fill in the blanks :

1×10=10

(a) _____ is any combination of text, graphic art, sound, animation and video.

(b) The branch of physics that studies sound is called _____.

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- (c) Images made up of thousands of pixels are called _____.
- (d) The full form of MIDI is _____.
- (e) CMYK model is used for _____.
- (f) Primary colours for colour TV are _____.
- (g) The full form of GIF is _____.
- (h) A video consists of a sequence of _____.
- (i) CRT stands for _____.
- (j) _____ is video compressing technique.
2. Write true or false : $1 \times 10 = 10$
- (a) Multimedia Kiosks are devices at public places as information provider.
- (b) Sound Forge is an image editing software.
- (c) MP3 is a audio file extension.
- (d) 2 bits can represent two different colours.
- (e) The full form of PCM is program code modulation.

- (f) Cropping is used to select part of the image and discard the unselected area.
- (g) Images that are stored using line, arcs and curves are bitmap images.
- (h) JPEG is a video compression technique.
- (i) The aspect ratio of HDTV is 4 : 3.
- (j) PAL stands for Phase Alternate Line.
3. Choose the correct answer : $1 \times 5 = 5$
- (a) Which of the following is not used in digitized sound process in digital video ?
- (i) Microphone (ii) Live audio
- (iii) Synthesizer (iv) Headphone
- (b) Threshold of hearing is
- (i) 20 kHz (ii) 20 Hz
- (iii) 10 Hz (iv) 10 kHz
- (c) Sound Pressure Level is measured in terms of
- (i) Cell (ii) Bel
- (iii) Hertz (iv) Kilo

(d) File Extension of MIDI format music files

(i) MID (ii) WAV

(iii) JPG (iv) PDF

(e) Adobe Photoshop is a software for

(i) Text editing (ii) Image editing

(iii) Video editing (iv) None of these

PART - B

Marks - 45

4. (a) Write some uses of multimedia. 3

(b) What do you mean by psychoacoustics ? 3

(c) What are ADC/DAC ? 3

5. (a) Differentiate between MIDI and Digital Audio. 3

(b) Write the principle of Amplifier. 4

(c) What is PCM ? 2

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6. (a) Write briefly about sampling and quantization. 4

(b) What do you mean by colour characteristics ? 3

(c) What do you mean by color depth ? 2

7. (a) Write briefly about image manipulation. 3

(b) Write brief note on any two colour models. 4

(c) What are additive colours ? 2

8. (a) Write down the principles of any two image compression technique. 5

(b) Write a brief note on digital still camera. 4

9. (a) Define line, field and frame in terms of video formats. 6

(b) State Nyquist sampling theorem. 3

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10. What do you mean by composite video and component video ? 9
11. Write briefly about PAL, HDTV and NTSC. 9
12. What is compression ? Why compression is needed ? Write any one video compression technique. 9