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**RETEST EXAMINATION - 2019**

Semester : 4th (Old)

Subject Code : CO-405

**ELEMENTS OF MULTIMEDIA**

Full Marks - 70

Time - Three hours

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

**Instructions :**

1. Questions on 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) Integration of text, graphics, sound, animation is called \_\_\_\_\_.
  - (b) Threshold of hearing is \_\_\_\_\_ Hz.

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- (c) Images made up of thousands of pixels are called \_\_\_\_\_.
- (d) The full form of PCM is \_\_\_\_\_.
- (e) RGB model is used in \_\_\_\_\_.
- (f) JPEG is used to compress \_\_\_\_\_.
- (g) The full form of TIFF is \_\_\_\_\_.
- (h) Four bits can represent \_\_\_\_\_ colours.
- (i) PAL stands for \_\_\_\_\_.
- (j) MP3 is an \_\_\_\_\_ file extension.
2. State true or false :  $1 \times 10 = 10$
- (a) An amplifier is used to increase the amplitude of a signal waveform, without changing other parameters of the waveform.
- (b) Compression can reduce the size of a file.
- (c) .wav format is developed by IBM and Microsoft is an image file format.
- (d) A vector image has to store the mathematical formulas that make up the image, which take up less space.

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- (e) Scanner is an input device for creating multimedia project.
- (f) Monochrome image contains many colours.
- (g) CLUT (Colour Look Up Table) is often called a Colour Palette.
- (h) HPEG is used to compress video.
- (i) The aspect ratio of PAL is 4:3.
- (j) Lossless image compression is exactly reversible.

3. Choose the correct answer :

$1 \times 5 = 5$

- (a) \_\_\_\_\_ are kept at public places to provide information and help.
- (i) Acoustics                      (ii) Kiosks
- (iii) Bell                              (iv) None of these
- (b) Sound pressure is measured in \_\_\_\_\_.
- (i) bel                                  (ii) decibel
- (iii) kilobel                          (iv) megabel

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(c) The pigment that may be defined as the absence of colour

- (i) White
- (ii) Black
- (iii) RGB
- (iv) CMYK

(d) MIDI data is

- (i) device independent
- (ii) dialogue independent
- (iii) device dependent
- (iv) dialogue dependent

(e) PAL broadcast standard contains

- (i) 625 scan lines per field
- (ii) 525 scan lines per field
- (iii) 625 scan lines per frame
- (iv) 525 scan lines per frame.

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PART - B

Marks - 45

4. (a) What do you mean by psychoacoustics ? 3

(b) Define digital audio. 3

(c) Write down the principle of microphone. 3

5. (a) What do you mean by sampling ? State Nyquist sampling theorem. 2+2=4

(b) Define quantization. 2

(c) Write the principle of scanner. 3

6. (a) Write brief notes on colour model. 4

(b) Write briefly about colour characteristics. 3

(c) What do you mean by Colour Depth ? 2

7. (a) Write brief notes on image manipulation. 4

(b) Why compression is necessary ? 2

(c) Write briefly about any one image compression technique. 3

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8. (a) What do you mean by Lossy and Lossless compression technique? 5  
(b) Write down the basic principle of digital still camera. 4
9. (a) Define aspect ratio. What is the aspect ratio of HDTV? 3  
(b) Write brief notes on Composite video and Component video. 6
10. Write brief notes on: 3×3=9  
(a) NTSC  
(b) PAL  
(c) SECAM
11. Write application of multimedia in any two fields. Write briefly about ADC/DAC. 4+5=9
12. What is MIDI? What are its advantages and disadvantages over digital audio? 3+3+3=9

