

CS/B.TECH/(IT-New)/SEM-7/IT-702/2013-14

2013

MULTIMEDIA

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words

as far as practicable.

GROUP – A

(Multiple Choice Type Question)

1. Choose the correct alternatives for the following: 10 x 1 = 10
- i) MPEG stands for
 - a) Motion Picture Express Group
 - b) Motion Picture Expert Group
 - c) Motion Picture Export Group
 - d) Motion Picture Extract Group.
 - ii) The minimum refresh rate to avoid flicker for all motion devices is
 - a) 30 Hz
 - b) 40 Hz
 - c) 50 Hz
 - d) 70 Hz
 - iii) GIF stands for
 - a) Graphics Image Format
 - b) Grey Information File
 - c) Geographical Information File
 - d) none of these.

3. What is HIS colour model? What is the relation between RGB and HIS colour model? 3+2
4. What do you mean by Sampling and Quantization error?
5. A series of messages is to be transferred between two computers. The message comprises the character from A to E. Analysis has shown that the probability (relative frequency of occurrence) of each character is as follows:

A = 0.35, B = 0.17, C = 0.17, D = 0.16, E = 0.15. Using the Huffman coding, derive the Huffman tree and also calculate the codeword set. 3+2
6. What is Quad tree? Explain insertion with example. 2+3

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. 3 x 15 = 45

7.
 - a) How is CD different from DVD?
 - b) Differentiate between CAV and CLV.
 - c) What do you mean by MODE-1 and MODE-2 of a CD-ROM.
 - d) A magnetic disc pack has 12 surfaces out of which 10 are recordable. Each surface has 50 tracks and each track is divided into a number of sectors. If the total capacity of the disc is 50000 KB and the capacity of each sector is 512 bytes, then
 - (i) How many sectors are present on each track?
 - (ii) How many cylinders are present in the disc pack? 3+3+3+(3+3)
8.
 - a) What do you mean by synchronization in multimedia?
 - b) What are the different types of synchronization in multimedia?
 - c) In which aspect quality of services (QOS) is important in multimedia?

- d) What do you mean by model? What is the significance of Synchronization reference model in multimedia?
2+4+3+(2+4)
9. a) What are the different types of audio file format?
b) What are hyper text and hyper media?
c) What is image resolution? What is the measured unit of it?
d) What is compression? Write MPEG compression algorithm.
3+3+3+(2+4)
10. a) What is document architecture? What are the different types of standard document architecture of multimedia?
b) What is the importance of SECAM and PAL?
c) What is the role of VOD in multimedia application?
d) What is the significance of K in CMYK colour model? Why is CMYK colour model called subtractive colour model?
(2+2)+3+3+(2+3)
11. Write short notes on any *three* of the following: 3 x 5
- a) MIDI
b) H.261
c) CCD.
d) R-Tree.
e) SGML.

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