

C6-R4: MULTIMEDIA SYSTEMS

NOTE:

1. Answer question 1 and any FOUR from questions 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

Time: 3 Hours

Total Marks: 100

1.

- a) What are hypertext and hyper media? Compare.
- b) Explain Huffman coding with example.
- c) What do you mean by term QoS? Discuss the applicability of QoS concept.
- d) What is MIDI? What are the various MIDI messages?
- e) What is SMIL? Why SMIL uses wallclock() function?
- f) Explain VRML with a short example.
- g) What are the various levels of RAID? What is the difference between RAID 4 and 5 levels?
(7x4)

2.

- a) Explain MPEG-4 video compression. What are I, P & B frames and what is their relevance?
- b) What is augmented reality? Explain any two Virtual reality tools.
(9+9)

3.

- a) Explain JPEG image compression. What are the differences in JPEG and JPEG 2000 format?
- b) In a conventional Multimedia Operating system, how process management and resource management are performed?
(9+9)

4.

- a) What do you mean by multimedia authoring system? Explain with suitable examples.
- b) Explain the query processing strategies to be adopted for efficient retrieval of images.
- c) Write a short note on:
 - i) Sampling rate
 - ii) Raster graphics
 - iii) Signal to noise ratio
(6+3+9)

5.

- a) Write a short note Content based image retrieval and its application.
- b) Write a short note on MIDI interfacing.
- c) Explain in detail the MPEG-7 format. Compare it with other versions of MPEG video encoding.
(6+3+9)

6.

- a) Explain OLAP operation in multi dimensional data model.
- b) Discuss the MP3 audio coding. How it is comparable to .aac extension audio files?
- c) Compare GIF and TIFF image coding. Write comment whether these encoding schemes store the images in spatial domain or in frequency domain?
(4+5+9)

7.

- a) What are the various QoS specifications to be considered when we deliver a multimedia file on internet based workstation?
- b) Describe the hand tracker and data globe utilities used in virtual reality system.
- c) Describe the RTP protocol components and its conjunctions with RTCP, Session Initiation Protocol (SIP) & Session Description Protocol.

(3+6+9)