

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) Write Short note on Multimedia Interchange.
 - b) What is the difference between MIDI and digital audio?
 - c) What is the difference between augmented reality and virtual reality?
 - d) What is Head Mounted Display (HMD) and what are the components of HMD?
 - e) What is QoS and what is its relevance in multimedia development?
 - f) Differentiate between temporal and non-temporal media type.
 - g) What is the importance of RAID technology for multimedia storage?

(7x4)

2.
 - a) Explain a generic the VRML script structure.
 - b) Give some examples of application domains of MPEG-7. What are the differences between P-frame and B-frame?

(9+9)

3.
 - a) What is Video-on-Demand (VOD)? What are the components of VOD?
 - b) Discuss the characteristics of MIDI? How is a basic MIDI message structured?

(9+9)

4.
 - a) What do you mean by Synthesis? Explain speech synthesis?
 - b) In which of the RAID level the bit-level striping with dedicated Hamming-code parity & byte-level striping with dedicated parity is used. Explain in details.

(9+9)

5.
 - a) Outline the significance of codecs in terms of multimedia systems. Describe one method each of audio data compression and video data compression.
 - b) Explain Augmented Reality. What is the significance of Simultaneous localization and mapping in Augmented Reality?

(9+9)

6.
 - a) Could an FPU speed up JPEG? How about a DSP chip?
 - b) Why is scene description information separate from audio-visual objects?
 - c) Briefly discuss **the process of morphing as it applies to digital images.**

(6+6+6)

7.
 - a) Differentiate between the BMP, JPG, GIF and TIFF image file formats mentioning where each is used?
 - b) Explain Earliest Deadline First Algorithm used in Multimedia Operating system?

(9+9)