

## 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) Describe the basic Synchronized Multimedia Integration Language structure and its difference with basic HTML.
  - b) Explain Standard MIDI file format. What are the various MIDI messages?
  - c) Describe the term QoS & its importance in multimedia.
  - d) What do you mean by Content-based image retrieval? Explain with example.
  - e) Differentiate between synchronous and asynchronous mode of transmission.
  - f) Explain Huffman coding with example.
  - g) What is the Immersive interaction in Virtual reality system?

(7x4)

2.

- a) Write short notes on:
  - i) SMIL Media format
  - ii) Temporal vs Non-temporal media
  - iii) Raster Graphics
- b) Explain JPEG image compression. What are the differences in JPEG and JPEG 2000 format?

(9+9)

3.

- a) What do you mean by multimedia authoring system? Explain with suitable examples.
- b) Multimedia production process consists of different strategies in the planning and project management. Illustrate such strategies.

(9+9)

4.

- a) Discuss the elements of virtual environment of a generic VR system.
- b) Describe the MPEG-4 encoding scheme. How is it different from MPEG-7?

(9+9)

5.

- a) Distinguish between the artisan metaphor and factory metaphor as a multimedia production metaphor.
- b) Encode the following symbols using Huffman coding tree method.

Symbol	Frequency
A	20
B	15
C	5
D	15
E	45

(9+9)

- 6.**
- a) What are the various video conference standards as per international telecommunication union (ITU)?
  - b) Explain the Real-time Transport Protocol. How does it monitor the QoS.

**(9+9)**

- 7.** Write short notes on:
- a) OLAP operation in multidimensional data model
  - b) Temporal redundancy in video encoding
  - c) RAID Technology and its advantages for multimedia storage

**(3x6)**