C6-R4: MULTIMEDIA SYSTEMS

«QP_SRLNO»

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 temporal media and non temporal media? Give representation and operation non temporal media.
b) Write short note on Synchronized Multimedia Integration Language (SMIL).
c) What do you mean by Augmented Reality?
d) Explain the different varieties of Virtual Reality.
e) Explain multimedia workstation architecture.
f) What do you mean by Content-based image retrieval? Explain with example.
g) How Steady State CPU Time is allocated for multimedia resource handling?

(7x4)

2.
a) Describe the MPEG-4 encoding scheme. How is it different from MPEG-7?
b) Describe Session Initiation Protocol (SIP) & Session Description Protocol.

(9+9)

3.
a) Briefly discuss the mp3 audio encoding scheme.
b) Compare RAID-1 & RAID-4 used in disk mirroring in multimedia database.
c) Explain the following term:
   i)   Aspect ratio
   ii) Vertical Retrace
   iii) Resolution

(6+6+6)

4.
a) What is VoIP? Explain it in detail.
b) What are the main elements of the MPEG-7 standard?
c) What is quantization step in JPEG compression process? Why it is required?

(6+6+6)

5.
a) Describe the joystick and data glove utilities used in virtual reality system.
b) How entropy encoding is different from source encoding?
c) Explain LZW encoding and decoding technique.

(6+6+6)

6.
a) Explain the functioning of Authoring major stages.
b) Explain the Real-time Transport Protocol. How does it monitor the QoS?

(9+9)

7.
a) What is Video-on-Demand (VOD)? What are the components of VOD?
b) What are the different output interface devices of virtual world? Explain any two in detail.
c) Write down the unique properties of a typical multimedia database.

(6+6+6)