

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 is DVI?
 - b) A digitized video is to be compressed using MPEG-1 standard. Assuming a frame sequence of IBBPBBPBBPBBI... and average compression ratios of 10:1(I), 20:1(P), and 50:1(B), derive the average bit rate that is generated by the encoder for the PAL digitization format.
 - c) Write the objectives of MPEG-7.
 - d) What is Transform Coding?
 - e) What are the software requirements for a virtual reality system?
 - f) Differentiate between hypertext and hypermedia.
 - g) Briefly illustrate the functions of ADDIE model of multimedia development life cycle.

(7x4)

2.
 - a) Illustrate the different strategies in the planning and project management in a multimedia production.
 - b) Explain three general forms of VR.

(12+6)

3.
 - a) What is content based coding? Which MPEG standard support that and how?
 - b) Why mp4 is important in multimedia coding?
 - c) Illustrate with block diagram the JPEG encoding and decoding techniques.

(8+5+5)

4.
 - a) Write at least three features of a MMX.
 - b) Describe the process of creating a multimedia presentation.
 - c) Write a comparative study between videophony and videoconferencing.

(5+4+9)

5.
 - a) What are the problems of putting an animation on the web?
 - b) Describe major steps in the authoring process.
 - c) What is VoIP?

(6+8+4)

6.
 - a) Illustrate with example the use and purpose of VRML.
 - b) Write down the characteristics of Multimedia Databases.
 - c) Why MP4 is important in multimedia coding?

(7+6+5)

7.
 - a) How WaveTable synthesizer is different from FM synthesizer and how MIDI file is different from digital audio? Describe the different components in the MIDI protocol.
 - b) Why Filter is used to an image? Briefly describe the architecture of a video frame grabber.

([4+4]+[2+8])