(3 Hours) **Total marks-80**

N.B (1) Question NO.1 is compulsory.
    (2) Attempt any **four** from remaining **six** questions.
    (3) Illustrate answers with neat sketches wherever required.
    (4) Answers to question should be grouped and written together.

Q1 **(a)** What is Multimedia? Explain various elements of Multimedia? **10**
    (b) A video can have duration (T) of 1 hour, a frame size of 640*480 at a color depth of 24 bits and a frame rate of 25 fps.calculate the video size? **10**

Q2 **(a)** Explain in detail various principles of Animation? **8**
    (b) Explain in detail Bitmap image and vector Drawing image? **7**

Q3 **(a)** What is MIDI and Digital audio? Compare and contrast the use of MIDI and digitized audio in Multimedia application? **8**
    (b) Explain the roles and responsibilities of all the Multimedia team members? **7**

Q4 **(a)** Explain Multimedia authoring tools and its different types in detail? **8**
    (b) Discuss different types of Multimedia structures? How they are organized? **7**

Q5 **(a)** Explain the process of making Multimedia? **8**
    (b) A message consisting of 5 different symbols ABCDE .The symbol frequencies are A-24 ,B-12,C-10,D-8,E-8. Generate a Huffman code tree and how many bits are required to transmit the complete string ABCDE. **7**

Q6 **(a)** Discuss the important role of planning and costing in Multimedia? **8**
    (b) What is compression? Explain JPEG compression process in Detail? **7**

Q7 Write short notes on any three. **15**
    (a) Image file format
    (b) Animation Techniques
    (c) Entropy encoding Run length
    (d) CBT
    (e) Alpha and Beta testing