(3 Hours) **[Total Marks : 80]**

N.B. :   1) **Question No.1** is **compulsory.**
2) Attempt **any three** from the remaining **five** questions.
3) Answers to **sub-questions** should be grouped together.

Q1. (a) Discuss methodologies used for planning and monitoring of multimedia system projects. **[10]**

(b) What is MIDI? Explain advantages and disadvantages of MIDI audio over other digital audio formats. **[10]**

Q2. (a) List and explain various print output technologies. **[10]**
(b) Discuss the use of RAID's in multimedia systems. Discuss various RAID levels. **[10]**

Q3. (a) Explain MPEG audio compression process in detail. **[10]**
(b) Discuss the fundamental elements of multimedia systems. Explain with relevant examples. **[10]**

Q4. (a) Explain in detail various digital display standards. **[10]**
(b) Why is the use of compression and de-compression in multimedia systems? Describe lossy and lossless compressions with relevant examples. **[10]**

Q5. (a) What are full motion videos? Explain how are they designed and transmitted over a network. **[10]**
(b) Explain IMA architectural framework used for designing multimedia systems. **[10]**

Q6. Write short notes on **any four** of the following : **[20]**
    a) Adaptive differential pulse code modulation.
    b) TIFF.
    c) Image Scanners.
    d) Huffman Coding.
    e) WORM optical drives.

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