(Pages : 2) **2880**

**Reg. No. : .....**

**Name : .....**

## Seventh Semester B.Tech. Degree Examination, April 2015
## (2008 Scheme)
## 08.704 (2) : MULTIMEDIA SYSTEMS AND DATA COMPRESSION
## (Elective – I) (R)

Time : 3 Hours Max. Marks : 100



PART – A

Answer **all** questions. **(10×4=40 Marks)**

1. What are the different steps involved in the multimedia design process ?
2. What are the requirements of a media editing software ?
3. What are the steps involved in storing name of a person and his photo in a database of multimedia system ?
4. What is Psychoacoustic model ?
5. What is the use of forward and inverse discret cosine transformation in JPEG image compression ?
6. What is the basic principle of Arithmetic coding ?
7. Compare LZ and LZW coding.
8. Find out group of pictures and prediction span for the following frame sequence. IPBBPI IPBBPI IPBBPI ....
9. What is motion vector ?
10. Compare P frames and B frames in video compression.

P.T.O.

## PART – B

Answer **any full** question from **each** Module.

### Module – I

11. a) What are the requirements of a multimedia system ? 8

    b) Explain the different media types and its key role in the development of a multimedia application. 12

OR

12. a) Explain the different types of multimedia systems with advantages and disadvantages. 12

    b) Explain the issues of data storage in multimedia database management system. 8

### Module – II

13. Consider the following character string and assume the relative probabilities of the symbols are reflected in the string : aa bbb ccc dddd eeeee ffffff ggggggg.

    a) Construct Huffman tree and write code word of each character. 10

    b) Find out the code word of the word abcdefg using Arithmetic coding. 10

OR

14. a) Explain Dolby audio coders. 12

    b) Compare Dolby audio coders and MPEG audio coders. 8

### Module – III

15. a) Compare MPEG Video Compression Standards. 12

    b) Explain the process of motion estimation and motion compensation. 8

OR

16. a) Explain the coding of audio visual objects in MPEG 4. 10

    b) Compare intra object synchronization and inter object synchronization. 10

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