**Reg. No. \_\_\_\_\_\_\_\_**

**Karunya University**

**(Karunya Institute of Technology and Sciences)**

(Declared as Deemed to be University under Sec.3 of the UGC Act, 1956)

**Supplementary Examinations – June 2016**

**Subject Title: MULTIMEDIA DATABASE Time : 3 hours**

**Subject Code: 14CS3057 Maximum Marks: 100**

1. a. Discuss the basic characteristics of audio and digital representation of audio signal. (15)

b. Encode the following text sequence “eeeeeeetnnnnnnnn” using run length coding techniques and describe briefly about it. (5)

**(OR)**

2. a. Explain the functionalities of MIRs architecture with the appropriate diagram. (10)

b. Write the necessary basic requirements for good user interface design and discuss the basic issues in developing multimedia database with these requirements. (10)

3. a. Explain the improvement methods used in basic color based image retrieval technique to overcome the limitations based on making use of similarity among colors and spatial relationships among the pixels. (15)

b. Given below is the histogram of a query image and three images (image1, image2, image3) in the database. Calculate the similarity measurement between the query and all the three images then find best matched image for the given query.

H**query**= (4, 4, 6, 6, 10, 10, 10, 10)

Himage1 = (8, 8, 8, 8, 8, 8, 8, 8)

Himage2 = (7, 7, 7, 7, 9, 9, 9, 9)

Himage3 = (2, 2, 10, 10, 10, 10, 10, 10) (5)

**(OR)**

4. Compare the major differences between traditional IR system and WWW search engine.

5. a. Discuss the various methods used for video indexing and retrieval. (10)

b. Explain shot based video indexing and retrieval method. (10)

**(OR)**

6. Describe the video shot detection or segmentation in multimedia database.

7. Explain meta search engine with the neat diagram.

**(OR)**

8. a. Discuss the clustering technique for efficient multimedia similarity search. (10)

b. Explain the QOS management, framework and specification suitable for multimedia communications. (10)

**Compulsory:**

9. Discuss the various data manipulation functions for multimedia database.