

Register Number:

M.E/M.TECH DEGREE EXAMINATIONS: JUNE 2013

Second Semester

COMPUTER SCIENCE AND ENGINEERING

CSE582: Multimedia Databases

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

1. State the abilities of a Multimedia Database Management System.
2. With a suitable example explain how SQL is used to represent relational calculus and relational algebra.
3. Write the structure of a R-tree node and give reason why R-trees have been preferred over k-d trees and point Quad-trees for multimedia applications.
4. What do you mean by inverted indices? List the disadvantages of it.
5. Write the three basic parameters to measure the quality of a compression technique.
6. How will you capture audio content through discrete transformations?
7. Write a short note on Real-Time Files(RTFs).
8. Differentiate between serpentine tape drive and helical tape drive.
9. Define virtual object in multimedia presentations.
10. Define the modes in which data transfer can take place in Mobile Multimedia Systems.

PART B (5 x 16 = 80 Marks)

11. a) What is a k-d tree? Explain insertion, deletion and range queries with suitable diagrams.

(OR)

- b) Discuss in detail about different basic operations in the Relational Algebra with suitable examples.

12. a) (i) How will you represent the image database with R-Trees? Explain it with suitable diagrams. (8)
- (ii) How will you represent the image database with Relations? (8)

(OR)

- b) Write in detail about latent semantic indexing technique used in Text databases.

13. a) (i) What do you mean by media abstraction in Multimedia databases? Explain it. (10)
(ii) Write short note on Query relaxation in Multimedia Database? (6)

(OR)

- b) Discuss in detail about Querying content of Video Libraries with suitable examples.

14. a) Discuss in detail about retrieving multimedia data from tapes.

(OR)

- b) (i) Explain the scheduling algorithms used for retrieval of multiple sectors from CD-ROMs. (8)
(ii) What is a RAID? Explain the architecture of RAID-0, 1 and 5 (8)

15. a) Explain the architecture of a distributed multimedia server system and also discuss in detail about distributed retrieval plans.

(OR)

- b) Write about the Bellman-Ford Algorithm in detail.
