



ANNA UNIVERSITY :: CHENNAI

B.E. / B.Tech. (Full Time) DEGREE ARREAR EXAMINATIONS, APR / MAY 2012

COMPUTER SCIENCE & ENGINEERING BRANCH

SEVENTH SEMESTER – (REGULATIONS 2008)

CS9038 – DATABASE TUNING

Time : 3 Hrs.

Max. Marks : 100

7

Answer ALL Questions

PART – A (10 X 2 = 20 Marks)

1. What is database tuning?
2. Brief on a method to circumvent hot spots.
3. How indexes reward database tuning?
4. Which types of queries are benefited by the Hash tables? How?
5. Compare table clustering and index clustering.
6. What is the significance of triggers in system performance?
7. With an example write the importance of event monitors.
8. Define Suspicious Queries.
9. What are configuration parameters? Give the minimum requirements of any two of them.
10. What is meant by rollback safe and SC-*acyclic* chopping?

PART – B (5 X 16 = 80 Marks)

11. Compare and contrast the clustered indexes and non-clustered indexes in processing the different type of queries. [16]
- 12.a.i) Explain the methods that are used to tune the Recovery subsystem. [10]
a.ii) Illustrate with an example, the priority inversion in transaction execution. [6]
- Or
- 12.b.i) Explain how and when the Isolation-guarantees can be weakened? [6]
b.ii) Explain the principles and tuning methods of the recovery subsystem. [10]
- 13.a. Explain with examples the tuning of queries. [16]

Or

13.b. Explain how the Application Interface can be tuned so as to improve the system performance. [16]

14.a. Illustrate how the cause-effect patterns in the producer-consumer chain of DBMS resources help in troubleshooting? [16]

Or

14.b. What are Performance indicators? List and explain how the indicators are to be measured for the following: [16]

1. Analyzing a query's access plan
2. Finding suspicious queries
3. Profiling a query execution

15.a. i) Give short note on the following: [4 + 4]

1. SAS
2. FAME

a.ii) With an algorithm explain how an optimal chopping can be done for a transaction T_i . [8]

Or

15.b. i) Take any 2 relations of your choice to give a query access plan for your query that needs to get data from both the relations based on some join condition. Use as many query structure operators as possible to give the query access plan of the query. Also mention the necessary assumptions taken to draw the same. [8]

b.ii) Illustrate with a neat example, the process of finding the finest chopping. [8]
