

7E4242

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B.Tech. (Sem. VII) (Main) Examination, Nov-Dec - 2011
Computer Science
7CS6.1 Advance Database Management Systems

Time : 3 Hours

Total Marks : 80

Min. Passing Marks : 24

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.)

UNIT - I

1. Suppose that three buffer page available and the only join method that is implemented is simple nested loops.
 - (a) Compute the cost of doing the projection followed by the join.
 - (b) Compute the cost of doing the join followed by the projection.
 - (c) Compute the cost of doing the join first and thus the projection on the fly.
 - (d) Would your answer changes, if its bugger were available. (4×4=16)

OR

1. What is optimization? How can you optimize a SQL query and how we estimate cost of query plan? Explain with suitable examples.

(4+6+6=16)

UNIT - II

2. (a) Define and describe abstract data type. How methods of abstract data types define in an external programming language? (2+6=8)
 - (b) How is an object identifier (oid) different from a record id in a relational DBMS? (8)

OR

2. (a) Compare OODBMS with ORDBMS. In particular. Differentiate between OQL and SQL and discuss the data models. (8)
 - (b) What is reference type? Define deep and shallow equality and illustrate them through an example. (4+4=8)

UNIT - III

3. Why we need to consider optimizing queries for parallel execution? Discuss inter-operation parallelism, left deep trees versus trees and cost estimation? (8+6+2=16)

OR

3. (a) Describe the three main architecture for distributed DBMS. (8)
(b) What is sub transaction? What issue must be considered in optimizing queries over distributed data in addition to where the data is located? (2+6=8)

UNIT - IV

4. Define and describe integrity constraints and multilevel relational and polyinstantiation with an example. (4+6+6=16)

OR

4. Describe role of database administrator in statical DBMS. Write all security and authorization method in detail. (10+6=16)

UNIT - V

5. (a) What is XML query? Write all application of XML in detail. (4+4=8)
(b) How will you process SQL query? Explain postgres system architecture. (4+4=8)

OR

5. Write short notes on :
(a) Querying and Transformation
(b) Optimization System
(c) Structure of XML data
(d) DoD Security Levels (4×4=16)