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Total No. of Questions : 09

B.Tech.(CSE) (2011 Onwards) (Sem.–6)
# RELATIONAL DATABASE MANAGEMENT SYSTEMS – II
Subject Code : BTCS-602
Paper ID : [A2307]

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTION TO CANDIDATES :
1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

Q1. Write briefly :

a) State any two variations of 2PL protocol.

b) What are the components of query processor?

c) How does the system generate timestamps?

d) Why is the concurrency control needed?

e) Can views be used for updating database?

f) Discuss about Embedded SQL.

g) What are the basic steps of query optimizer?

h) Discuss mapping cardinalities.

i) Write basic data mining process.

j) What is a log in RDBMS?

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SECTION-B

Q2) a) What is five level schema in distributed database system? Give advantages and disadvantages of distributed database systems.

b) Discuss the advantages and disadvantages of OODBMS.

Q3) What is multi-valued dependency? Explain with example how it is related to normalization?

Q4) What is a timestamp? How does the system generate timestamps? Discuss the timestamp ordering protocol for concurrency control.

Q5) a) What is a transaction? What are various states of a transaction? Explain each state with the help of example.

b) Describe three-level schema architecture. Why do we need mappings between schema levels? How do different schema definition languages support this architecture?

Q6) Develop a Relational Model for a car-insurance company whose customers own one or more cars each. Each car has associated with it zero to any number of recorded accidents. Assume appropriate attributes and state any assumptions you make

SECTION-C

Q7) a) Differentiate between Strict two-phase locking protocol and conservative two-phase locking protocol for concurrency control in databases with the help of an example.

b) What is data mart? Which schema is suitable for data mart?

Q8) a) Does the data dictionary have any role to play in query processing? Describe with the help of an SQL query.

b) Why 4NF is a normal form more desirable than BCNF? Why?

Q9) a) Define shadow paging. What are the drawbacks of shadow-paging technique?

b) Explain the differences between physical level, conceptual level and view level of data abstraction.