B.TECH DEGREE EXAMINATIONS APRIL 2011

Sixth Semester

INFORMATION TECHNOLOGY

U07CS501: Database Management Systems

Time: Three hours   **Maximum marks: 100**

Answer All Questions:-

PART A (10 x 1 = 10 Marks)

1. Identify pair of relations operation

    a) Select   b) project   c) rename   d) Cartesian-product

2. Which represent the basic power required in a relational query language

    a) tuple relational calculus   b) domain relational calculus c) either a or b   d) both a & b

3. Identify security threats and issues on Application data security which handled by SQL authorization.

    a) data must be protected while they being transmitted

    b) data may need be protected from intruders who are able to bypass OS security

    c) data may have complex privacy restrictions that go beyond what a database can enforce

    d) all

4. Which is not data integrity that can be expressed using SQL.

    a) primary-key   b) foreign-key   c) triggers   d) None of the above

5. If the relations are sorted, which join may be desirable

    a) block nested-loop   b) indexed nested loop   c) merge   d) hash

6. An expression can be evaluated by means of _____ in query processing

    a) Aggregation   b) Association   c) materialization   d) elimination

7. To ensure integrity of the data, the database system can be maintain the following properties of the transactions

    a) Atomicity, Consistency   b) Isolation, Durability   c) ACID   d) Any one

8. Which execution of transactions improves throughput of transactions, System utilization and reduces waiting time of transactions

    a) Linear   b) Control   c) Concurrent   d) Sequence

9. The different steps involved in getting data into a data warehouse are called

    a) extract   b) ETL task   c) transform   d) load

10. Which is not data mining

 a) Repository   b) text mining   c) data visualization   d) regression

PART B (10 x 2 = 20 Marks)

11. Specify the different levels of abstraction in DBMS.

12. Point out the role of DML and DDL.

13. Define Entity Relationship Model.

14. Define super key, candidate key, primary key and a foreign key.

15. Mention the ACID properties of a DB.

16. Mention two modes by which the data item can be locked.

17. Give the storage hierarchy.

18. List out the kinds of indices.

19. Specify types of DBMS based on degree of homogeneity.

20. Define Object Relational Data Model.

PART C (5 x 14 = 70 Marks)

21. a) Analyze the drawbacks of File Processing System?

(OR)

 b) List out the fundamental relational algebra operations and explain them.

22. a) Elaborate on the built in data types and user defined data types in SQL.

(OR)

 b) Write a short notes for the following

 (i) 1 Normal Form   (ii) 2 Normal Form

23. a) Discuss in detail the Hash File Organization

(OR)

 b) Discuss in detail the steps involved in processing a query with diagram.

24. a) Write in detail about time based protocol.

(OR)

 b) Write in detail the deadlock detection.

25. a) Explain in detail about XML Concepts

(OR)

 b) Explain the different types of distributed database in detail.

****