AI-111

April-2023

B.C.A., Sem.-IV

CC-208 : DATABASE MANAGEMENT SYSTEM – II

Time : 2:30 Hours]　　　　　　　　　　　　　　　　　　　　　[Max. Marks : 70

1. Write the following :
   (i) What is SQL ? Explain the SQL features and benefits.　　　　　7
   (ii) Explain Data Manipulation Commands in details with an example.　　　　　7

   OR

   (i) Explain Aggregate functions in details with an example.　　　　　7
   (ii) Explain SQL constraints in details with an example.　　　　　7

2. Write the following :
   (i) What is a Transaction ? Explain its properties in details.　　　　　7
   (ii) What is concurrency control ? Explain its properties in details.　　　　　7

   OR

   (i) Explain concurrency locking in details.　　　　　7
   (ii) List and explain different state of transactions and explain scheduler in transaction.　　　　　7

3. Write the following :
   (i) What is DDBMS ? Explain its advantages and disadvantages.　　　　　7
   (ii) Explain difference between Distributed databases and Distributed processing.　　　　　7

   OR

   (i) What is distributed database transparency ? Explain its features in details.　　　　　7
   (ii) Explain the levels of data and process distribution in details.　　　　　7

4. Write the following :
   (i) Explain set operators in SQL with an example.　　　　　7
   (ii) Explain Sequence. How can you create, drop a sequence with an example ?　　　　　7

   OR

   (i) Explain different types of joins in SQL.　　　　　7
   (ii) Explain sub-queries in detail with an example.　　　　　7

5. Attempt any **seven** out of **twelve** : 14

(1) Which of the following are the five built-in functions provided by SQL ?

    (A) COUNT, SUM, AVG, MAX, MIN

    (B) SUM, AVG, MIN, MAX, MULT

    (C) SUM, AVG, MULT, DIV, MIN

    (D) SUM, AVG, MIN, MAX, NAME

(2) The SQL keyword delete is used to delete a table. (True or False)

(3) The SQL keyword _____ is used with wildcards.

    (A) LIKE only   (B) IN only

    (C) NOT IN only   (D) IN and NOT IN

(4) Two phase Locking protocol has _____ and _____ phase.

(5) _____ command is used to save the transaction.

    (A) SAVE   (B) COMMIT

    (C) ROLLBACK   (D) (A) and (B) both

(6) MPSD stands for _____.

(7) With failure transparency, all of the actions of transactions are committed or none of them are committed. (True or False)

(8) Sub queries can be nested multiple times. (True or False)

(9) What is primary key ?

(10) What type of join is needed when you wish to include rows that do not have matching values ?

    (A) Inner join   (B) Outer join

    (C) Equi join   (D) All of the above

(11) The UNION clause is used to combine the output from multiple queries together into a single result table. (True or False)

(12) There should be one condition within the WHERE clause for each pair of tables being joined. (True or False)

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