L

Con. 3755-12.

GN-6972

(3 Hours) [Total Marks : 100]

N.B. : (1) Question No. 1 is **compulsory**.
      (2) Attempt any **four** out of the remaining **six** questions.
      (3) Assume any suitable data wherever **required**.

1. You need to design a database for an art gallery. The database schema must keep information about artists, their names, (which are unique), birth places, age and style of art and photograph. For each piece of artwork, the artist, the year it was made, its unique tittle, its type of art (e.g. painting, sculpture, photograph), and its price, along with picture (thumbnail) must be stored. The database also stores. information about customers.

   For each customer, database stores the person's unique name, address, and total amount of money spent in the gallery and the artist and type of art the customer tends to like (can be a text).

   (a) Draw an EER dia for the system   6
   (b) Map the EER to Relations   8
   (c) Take two typical queries and write them in SQL.   6

2. (a) Explain different architectures for parallel database.   10
   (b) State comparison of RDBMS, OODBMS, ORDBMS.   10

3. (a) Explain data fragmentation, replication and allocation technique for distributed 10
       database design.
   (b) Give an overview of 3–Tier client server architecture.   10

4. (a) What is SQL 3 ? Write in detail about features of SQL 3.   10
   (b) What is well formed and vaild XML document ? With example explain what is 10
       XML schema file ?

5. (a) Explain in detail about heuristic approach to query optimization.   10
   (b) Explain the method for implementing the SELECT operation.   10

6. (a) Explain conceptual database design in database design and implementation   10
       process.
   (b) Explain concurrency control in distributed database.   10

7. Write a short notes on (any **two**) :–   20
   (a) Specialization and Generalization
   (b) Joins in SQL
   (c) Measures of query cost.