Before answering the question paper the candidate should ensure that they have been supplied the correct question paper. Complaints in this regard, if any, shall not be entertained after the examination.

**Note:** Question No. 1 is Compulsory and attempt two questions from each section. All questions carry equal marks.

1(a) Differentiate between DDL and DML
(b) Distinguish between shared and exclusive locks.
(c) What do you mean by rollback?
(d) Distinguish between physical and logical data independence.

**SECTION A**

2(a) What is the Advantage of DBMS approach over file processing system?
(b) Explain three level architecture.
3. Explains the Data Models
4(a) Draw employee and department table and considering table attributes of your own solve the following SQL queries.

- Write a Query to display the names of employees who are drawing a salary between 3000 and 4000.
- Write a Query to display the name of faculty from department table, who teaches DBMS.
- Write a Query to Character & Number Function in sql?
- Write a Query to Implement Advance Query Statement in sql?
- Write a Query to Implement Constraint on a Table in sql?

(b) Define SQL in detail and give example of some basic queries of SQL.

**SECTION B**

5 (a) Differentiate between partial Functional dependency and full functional dependency.
(b) Explian 4 NF in detail.
6 (a) Explain ACID properties.
(b) Distinguish between rigorous locking and strict two phase locking
(c) Describe shadow paging technique for recovery.
7 (a) Explain the architecture of data warehousing with a neat diagram.
(b) Differentiate between parallel and distributed database.