(2 ½ Hours) [Total Marks: 75]

N.B 1) All questions are compulsory.
B.2 Figures to the right indicate marks.
B.3 Illustrations, in-depth answers and diagrams will be appreciated.
B.4 Mixing of sub-questions is not allowed.
B.5 Assume suitable data if necessary and state it clearly.

Q.1 Attempt All. (15M)

(a) Multiple Choice Questions

1)The level of data abstraction which describes how the data is actually stored is:
A conceptual level
B physical level
C file level
D none of these

2).....is called as top-down approach.
A Generalization
B Specialization
C Aggregation
D Synthesization

3) Which of the following is the syntax for views where v is view name ?
A) Create view v as "query name";
B Create "query expression" as view;
C Create view v as "query expression";
D Create view "query expression";

4 A record in the table is also knows as.....
4.A column
4.B tuple
4.C Field
4.D data

5).....is used to find absolute value of a number.
A ABSOLUTE
B ABS
C CEIL
D FLOOR

TURN OVER

b Fill in the blanks. [use following answer pool to fill the correct answer.]
[three level, column, unique, single , committed, length, DDL ,DML]

b.1 Database Architecture___.
b.2 Primary key should be _____.
b.3 A transactions completes its execution is called as_____.
b.4 _____is one of the string handling function in mysql.
b.5 ALTER command is___..

c Answer in one line.

a Define DBMS.
b Write syntax for updating a row in a table.
c Write syntax of projection operator in Relational Algebra.
d Define subquery.
e Give one example of derived attribute.

Q.2 Attempt the following(Any THREE) [15 M]

a What are the disadvantages of file processing system?
b Explain Relational model.
c What do you mean by Binary Relationship and Ternary Relationship? Explain with suitable examples.
d Write a note on Specialization.
e Define following terms:
e.i Value Set
e.ii Composite Attribute
e.iii Multivalued Attribute
e.iv Simple Attribute
e.v Entity Type
f Construct an ER Diagram for Airline Reservation System. [Assume suitable data and mapping cardinalities exists.]

Q.3 Attempt the following(Any THREE) [15 M]

a Explain following operations of Relational Algebra with algebraic query example.
a.i Projection
a.ii Join
b What do you mean by Functional Dependency?
c How do you Backup and Restore Database in MySQL?
d Explain Group BY and Having Clause of MySQL with suitable query example.
e Explain all Aggregate Functions used in MySQL.
f Perform following using mysql.
f.i Create a table Supplier(suppno,sname,city) with suitable data types. "Suppno" columns is primary Key.
f.ii Insert 2 records.
f.iii Delete a record who lives in city starts with letter 'M'.

Q.4 Attempt the following(Any THREE) **[15 M]**

a What security mechanism is used to secure database?

b What do you mean by Join? Explain Left outer join and Right outer join with suitable query example.

c What are the different threats to the databases?

d What do you mean by privileges with respect to databases? How to grant and revoke privileges?

e Write short note on correlated subqueries. Give example of it.

f Consider following tables-

Customer(custno,cname,city,creditlimit)

Orders(orderno,custno,orderdt,qty,amt)

Customer

Custno	Cname	City	creditlimit
C1	Harshika	Mumbai	50000
C2	Priya	Banglore	60000
C3	Bhavana	Delhi	70000

Orders

Orderno	Custno	Qty	Amt
O1	C1	20	200000
O2	C1	12	500000
O3	C2	7	10000
O4	C3	12	220000
O5	C3	10	40000

Solve following queries and trace the output.–

f.i Find out the name of customer who has placed the orders.

f.ii Create a view showing the details of customer living in same city.

f.iii How many orders placed by each customer? (Solve with subquery)

Q.5 Attempt the following (Any THREE) **[15 M]**

a Explain architecture of DBMS.

b Explain 3NF and BCNF.

c What is the use of keyword 'Distinct' and 'all' in MySQL? Explain with query example.

d How to create and drop a user in MySQL?

e What do you mean by views? What are its types?