Time: 1 hr.   **Marks:30**

Note: All questions are compulsory.
                 Draw neat diagrams wherever necessary.
                 Figures to the right indicate full marks.

Q.1   **Answer the following. (Any TWO)**   **[10]**

(a) Write a note on Data Independence.
(b) What are different advantages of a Database Management System (DBMS)?
(c) Define following terms with suitable example:
    i.   Entity
    ii. Entity set
    iii. Attribute
    iv. Attribute set
    v.   Relation
(d) How to use **LIMIT** and aggregate functions in SQL?

Q.2   **Answer the following. (Any TWO)**   **[10]**
(a) Define following functions with suitable syntax and examples:
    i.   replace()
    ii. length()
    iii. rtrim()
    iv. sqrt()
    v.   mod()

(b) What is a functional dependency? Explain 1NF with a suitable example.
(c) What are common threats to databases?
(d) How can you delete a user from a database? Provide an example.

Q.2   **Answer the following. (Any TWO)**   **[10]**
(a) Explain physical and logical level of abstraction in a database management
    system.
(b) What is Data? What are different types of data?
(c) What is the role of the Database Administrator (DBA) in database security?
(d) How can you use **SAVEPOINT** in a transaction?

---X---X---