**Roll No…………….. Total No. of Pages:……**

**ST-1 (SET-I)**

**4th SEMESTER 2023-24**

**22CS007- Database Management System**

**Time allowed: 90 Minutes Max. Marks: 40**

**General Instructions:**

* **Follow the instructions given in each section.**
* **Make sure that you attempt the questions in order.**

**SECTION-A (10\*1 mark=10 marks)**

***(All questions are compulsory)***

1. Which of the following is the correct definition of a functional dependency in a relational database?
   1. A relationship between two tables
   2. **A constraint that specifies the relationship between attributes in a table**
   3. A set of operations to manipulate data in a table
   4. A technique to optimize query performance in a database
2. In an ER model, a weak entity is one that:
   1. Has a weak relationship with another entity
   2. Lacks attributes
   3. **Depends on another entity for its existence**
   4. Cannot participate in relationships
3. Which type of join returns only the matching rows between two tables?
   1. **Inner join**
   2. Left join
   3. Right join
   4. Full outer join
4. Which SQL clause is used to limit the number of rows returned in a SELECT statement?
   1. **LIMIT**
   2. TOP
   3. ROWNUM
   4. FETCH
5. Which technique is used to prevent unauthorized users from viewing data by altering the database schema?
   1. Access controls
   2. Database encryption
   3. **Data masking**
   4. Database normalization
6. What is the purpose of a cursor's WHERE CURRENT OF clause?
   1. It specifies the condition for closing the cursor.
   2. It specifies the condition for deleting a row from the cursor.
   3. **It specifies the condition for updating the current row of the cursor.**
   4. It specifies the condition for declaring a new cursor.
7. Which control structure is used to transfer the control from a function back to the caller?
   1. BREAK
   2. CONTINUE
   3. EXIT
   4. **RETURN**
8. Which of the following is a common vulnerability in database security?
   1. Buffer overflow
   2. Firewall misconfiguration
   3. Weak encryption algorithm
   4. **All of the above**
9. In the context of functional dependencies, which of the following is the highest normal form?
   1. 1NF (First Normal Form)
   2. 2NF (Second Normal Form)
   3. 3NF (Third Normal Form)
   4. **BCNF (Boyce-Codd Normal Form)**
10. Which normal form eliminates partial dependencies in a relational model?
    1. First normal form (1NF)
    2. Second normal form (2NF)
    3. **Third normal form (3NF)**
    4. Boyce-Codd normal form (BCNF)

**SECTION-B (5\*2 mark=10 marks)**

***(All questions are compulsory)***

**SECTION-C(Coding Question) (4x5 marks=20 marks)**