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

**ST-3 (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. When dealing with database transactions, there is often a need for multiple users to use a database to perform different operations. In this case, \_\_\_ of the database occurs.
2. Concurrent Connection
3. Concurrent Reduction
4. **Concurrent Execution**
5. Concurrent Revolution
6. Which type of error occurs when the database crashes while a transaction is being executed?
   1. **System error**
   2. Media error
   3. Transaction error
   4. Operator error
7. Which of the following is a concurrency control protocol?
8. Lock Based Concurrency Control Protocol
9. Timestamp Concurrency Control Protocol
10. Validation Based Concurrency Control Protocol
11. **All of the above**
12. Which of the following is not a type of loop in programming?
    1. FOR loop
    2. WHILE loop
    3. REPEAT loop
    4. **FOREACH loop**
13. Views in a DBMS are used for:
    1. Creating temporary tables
    2. **Improving query performance**
    3. Defining primary key constraints
    4. Storing complex queries
14. Which of the following is a disadvantage of the shadow paging recovery technique?
    1. **Increased disk space requirement**
    2. Slower recovery process
    3. Limited support for concurrent transactions
    4. Difficulty in implementing locking mechanisms
15. Which recovery technique uses backward recovery to undo the changes made by a failed transaction?
    1. **Undo logging**
    2. Redo logging
    3. Deferred update
    4. Immediate update
16. In a DBMS, a cursor can be used to:
    1. Insert rows into a table
    2. Delete rows from a table
    3. Update rows in a table
    4. **All of the above**
17. The "CASE" statement in SQL is used to:
    1. **Perform conditional branching**
    2. Perform iterative looping
    3. Define primary key constraints
    4. Create temporary tables
18. Which type of error occurs when the data written by a transaction is not yet permanently stored on the disk and a failure happens?
    1. System error
    2. **Media error**
    3. Transaction error
    4. Operator error

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

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

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