



QP CODE: 24802797



24802797

Reg No :

Name :

I.M.C.A DEGREE EXAMINATION, APRIL 2024

Third Semester

Faculty of Technology and Applied Sciences

Integrated MCA

Core - IMCA3C03 - DBMS AND NO SQL

2020 Admission Onwards

C09D7153

Time: 3 Hours

Maximum: 75 Marks

Part A

*Answer any **ten** questions*

*Each question carries **3** marks*

1. Discuss the disadvantages of DBMS.
2. What is a data model?
3. Define entity and entity set. Give examples.
4. Depict the usage of key and participation constraint with suitable examples.
5. How can we translate weak entity sets?
6. Difference between TRUNCATE,DELETE and DROP command in SQL.
7. Discuss Nested Queries with Example.
8. How do you use views during the application development?
9. Explain the Need for concurrent Execution
10. What is the significance of Aries Algorithm?
11. Distinguish between Key value and Document data models.
12. List Advantages and Disadvantages of Replication.

(10×3=30 marks)





Part B

Answer *all* questions

Each question carries **9** marks

13. a) Illustrate Relationships, Relationship sets and mapping cardinalities.

OR

b) Explain how a database can be designed for a Student Information System.

14. a) Briefly write a note on Integrity Constraints.

OR

b) Describe how to translate the relationship sets with participation constraints into relational tables.

15. a) Explain Embedded SQL, Dynamic SQL and Cursors with example.

OR

b) Consider the attribute set $R=ABCDEFGH$ and the FD set $F=\{AB \rightarrow C, AC \rightarrow B, AD \rightarrow D, BC \rightarrow A, E \rightarrow G\}$ for attribute sets $ABC, ABCEG$ compute the set of dependencies that hold over set and name the strongest Normal Form

16. a) Explain the need for concurrency control. How the issues of concurrent execution is solved.

OR

b) What are the advantages and disadvantages of a distributed database management system over a centralized DBMS?

17. a) Compare NoSQL and Relational databases.

OR

b) Discuss Master slave Replication in NoSQL.

(5×9=45 marks)

