STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted from the academic year 2019 – 2020 & thereafter)

SUBJECT CODE: 19BI/PC/DB14

M. Sc. DEGREE EXAMINATION, NOVEMBER 2021
BIOINFORMATICS
FIRST SEMESTER

COURSE: CORE
PAPER   : DATABASE MANAGEMENT SYSTEMS
TIME   : 3 HOURS   **MAX. MARKS: 100**

SECTION - A

Write the codes to execute the following commands   **(15 x 1 = 15)**
1. Cd
2. Pipe
3. Chown
4. Grep
5. Mkdir
6. Cat
7. Touch
8. *
9. More
10. Tail
11. Chmod
12. Ls-a
13. Rm
14. Pwd
15. head

SECTION – B

Answer any THREE in detail: **(3X15=45)**

16. What is a file? Explain the different ways of file organization.
17. Write about the different types of SQL queries.
18. Explain the SQL functions with example codes
19. What are locks? Explain their types.
20. What is a multimedia database? Write their features and applications and compare it with features of a text database.

SECTION –C

Execute any three programs   **(3X10 = 30)**

21. Write and execute an SQL query to implement the constraints – distinct and not null
22. Create primary and foreign keys for customers table and orders table.
23. Create queries with substr, instr, upper, lower, round, groupby functions for employee table
24. Execute linux codes to grant user permissions to read and execute while removing write permission from others

Record   **10**

Section A – Answer all questions. Each Question carries one mark.   **(15 X 1 = 15 marks)**

1. Which of the following is a database element?
   a) Data   b)Relationship
   c) Constraints and schema   d)All of the above

2. E-R models are normally represented in a/an _____.
   a) Binary relationship diagram
   b) Table
   c) Entity relationship diagram
   d) Object

3. The most widely used conceptual model is
   A. E-R model   B. Chen model   C. External model   D. Attribute model.

4. Which of the following schemas does define a view or views of the database for

particular users?
a) Internal schema b) Conceptual schema
c) Physical schema d) External schema

5. Which of the following is an attribute that can uniquely identify a row in another table?
a) Secondary key b) Candidate key
c) Foreign key d) Alternate key

6. Define locks.
7. What is an entity?
8. What is tuple?
9. Define subqueries
10. What is one-one relationship?
11. What is heap file orgnisation?
12. Give an example of correlated subquerry.
13. What is a B tree?
14. What is deadlock?
15. Give an example of multimedia database.

Section – B
Answer any two from the following (2X5=10)
1. What are keys in DBMS? Explain the different types with an example.
2. Explain with queries that are available with single row functions.
3. What are the different types of locks involved in DBMS?

Section C – Answer any two of the following (25)

1. Create primary and foreign keys for books table and authors table.
2. Create queries with substr, instr, upper, lower, round, groupby functions for any dataset of your interest.
3. Create a database with student number, name and marks to use the not null constraint and default constraint.