(FOR THE CANDIDATES ADMITTED

22UAI308

DURING THE ACADEMIC YEAR 2022 ONLY)   REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : NOVEMBER-2023

B.Sc(CS with AI & ML)   **MAXIMUM MARKS: 50**

SEMESTER:III   **TIME : 3 HOURS**

PART - III

22UAI308– DATABASE SYSTEMS CONCEPTS

SECTION – A   (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.
(Objective Questions with four Multiple Choices)   (K1)

1. The collection of data, usually referred to as the_____, contains information relevant to an enterprise.
a) database   b) table   c) entity   d)record

2.In string operation which character matches any substring?

a)%   b)-   c)----   d) *

3. An entity is represented by a set of_____

a)values   b)attributes   c)domain   d) element

4. What is the full form of SQL?

a) Structured Query List   b) Structure Query Language

c) Structure Queried Language   d) Sample Query Language

5. _____ loop in PL/SQL ensures that at least one statement is executed before the loop terminates.
a)while   b)for   c)cursor for   d) exit

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES   (K2)
6. What is aggregate function?

7. List the built-in aggregate function offer by SQL.

8. How do you insert data into a collection in MongoDB?

9. List the benefits of SQL.

10. Define triggers?

SECTION – B   (5 X 3 = 15 MARKS)
ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11.   a) Describe the widely used database system application.
                    (OR)
        b) List out the various types of keys used in relational database .

12.   a) Write the basic built-in data types supported by SQL

                    (OR)
        b) Construct how to declare and invoke the SQL functions and procedure.

13. a) Interpret the mapping cardinalities of binary relationship set.

(OR)

b) Illustrate the concept of BCNF and Dependency Preservation.

14. a) Explain briefly about code's rule in DBMS

(OR)

b) Outline the number function and date function used in SQL. Give an example.

15. a) Point out the PL/SQL block and its elements.

(OR)

b) Define Cursor. Explain the types of cursor and how to use it in PL/SQL code?

SECTION – C   (5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K4 (Or) K5)

16. a) Sketch and explain the database system architecture .

(OR)

b) Determine the fundamental operation of relational algebra with an example.

17. a) Construct the basic structure of SQL queries with an example.

(OR)

b) Examine how to use recursion in SQL give an example?

18. a) Explain the basic structure of Entity-Relationship diagram.

(OR)

b) Point out the practical issues in database design process.

19. a) Explain the following with example
       i) DDL   ii)DML   iii)DCL

(OR)

b) Categorize the various types of operator supported by SQL in detail.

20. a) Construct the control structure used in PL/SQL with an example.

(OR)

b) Create a PL/SQL program to find the total and average of 4 subjects mark of a student and
    display the grade

ETHICAL PAPER

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