23MCU310

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2023
(Third Semester)

Branch – **MATHEMATICS WITH COMPUTER APPLICATION**

DATABASE MANAGEMENT SYSTEMS

Time: Three Hours Maximum: 50 Marks

SECTION-A (5 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 1 = 5)

1. Which is a set of one or more attributes that, taken collectively, allow us to identify uniquely a tuple in the relation?
   (i) Candidate Key (ii) Primary Key
   (iii) Foreign Key (iv) Super Key

2. Each type may include a special value called the ___ value.
   (i) Only one (ii) Null
   (iii) Numeric (iv) Alphanumeric

3. When a query uses the ___clause, duplicate tuples must be eliminated.
   (i) select distinct (ii) Group Clause
   (iii) Null Clause (iv) Having Clause

4. Which of the following is useful when some error condition is detected during execution of a transaction?
   (i) Transaction Commit (ii) Transaction Rollback
   (iii) Transaction Integrity (iv) None of the Above

5. Which term is used with the entity set to refer the actual collection of entities belonging to the entity set?
   (i) Attributes (ii) Transactions
   (iii) Extension (iv) Entity Set

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6 a) Discuss about the relationship among the three levels of Data Abstraction.
OR
b) Describe the Keys in Database.

7 a) Discuss about SQL Query Languages.
OR
b) Dissect Queries on a single relation.

8 a) Explain about Having Clause.
OR
b) Explain the concept of Scalar Subqueries.

Cont...

9 a) How to use Views in SQL Queries?

OR

b) Design Constraints on a Single Relation.

10 a) Explicate Entity Sets.

OR

b) Outline your views on Alternative E-R Notations.

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11 a) Enumerate Data Models and their categories.

OR

b) Eradicate Database Schema.

12 a) Summarize the basic structure of SQL Queries.

OR

b) Elucidate the Rename and String Operations.

13 a) Dissect Modification of the Database.

OR

b) Demonstrate Aggregate Functions.

14 a) Discuss about Transactions.

OR

b) Distinguish SQL Data Types and Schemas.

15 a) Sketch Entity – Relationship Diagrams.

OR

b) Compare Specialization and Generalization in Extended E-R Features.

Z-Z-Z END