18MCU25

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2023
(Fifth Semester)

Branch – **MATHEMATICS WITH COMPUTER APPLICATIONS**

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. The overall design of the database is called the database _____
   (i) instance (ii) entity. (iii) schema (iv) semantic
2. _____ operation automatically eliminates duplicates.
   (i) union (ii) intersection
   (iii) select (iv) none of the above
3. A subquery that uses a correlation name from an outer query is called _____ subquery
   (i) correlated (ii) nested (iii) inner (iv) outer
4. Privilege is one type of _____
   (i) combination (ii) implementation
   .(iii) authorization (iv) all of the above
5. Which is called a set of relationship of the same type?
   (i) set (ii) relationship
   .(iii) relationship set (iv) relationship instance

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

6 a Describe about database languages.
OR
b Explain the keys used in DBMS.

7 a Describe about the basic built-in types used in SQL.
OR
b Explain natural join with example.

8 a How to modify the database by deletion operation?
OR
b Summarize about materialized views.

9 a Describe about index creation in SQL.
OR
b Explain about JDBC in SQL with example.

10 a How to represent a weak entity set in ER model?
OR
b Explain about Aggregation with example of ER diagram.

Cont...

SECTION -C (30 Marks)

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

11 a Elucidate about database architecture with neat diagram.

OR

b Enumerate how to define structure of relational databases with example.

12 a Discuss the (i) intersect operation (ii) except operation.

OR

b Discuss about the structure of SQL queries on (i) single relation (ii) multiple relations.

13 a Highlight the aggregate functions with example.

OR

b Summarize about outer joins with example.

14 a Analyze about referential integrity.

OR

b Discuss about SQL types and schemas in (i) default values (ii) user defined types.

15 a Examine the following ER model.

(i) Entity sets (ii) Attributes

OR

b Outline the major components of an ER diagram.

Z-Z-Z END