

**PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)**

**MCA DEGREE EXAMINATION MAY 2022  
(Second Semester)**

**Branch – COMPUTER APPLICATIONS**

**DATABASE MANAGEMENT SYSTEM**

Time: Three Hours

Maximum: 75 Marks

**SECTION-A (10 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks (10 x 1 = 10)

1. Which of the following is generally used for performing tasks like creating the structure of the relations, deleting relation?  
(i) DML(Data Manipulation Language) (ii) Query  
(iii) Relational Schema (iv) DDL(Data Definition Language)
2. What do you mean by one to many relationships?  
(i) One class may have many teachers (ii) One teacher can have many classes  
(iii) Many classes may have many teachers (iv) Many teachers may have many classes
3. A Database Management System is a type of \_\_\_\_\_ software.  
(i) It is a type of system software (ii) It is a kind of application software  
(iii) It is a kind of general software (iv) Both A and C
4. Which one of the following refers to the "data about data"?  
(i) Directory (ii) Sub Data  
(iii) Warehouse (iv) Meta Data
5. To which of the following the term "DBA" referred?  
(i) Data Bank Administrator (ii) Database Administrator  
(iii) Data Administrator (iv) None of the above
6. In general, a file is basically a collection of all related \_\_\_\_\_.  
(i) Rows & Columns (ii) Fields  
(iii) Database (iv) Records
7. Which one of the following commands is used for removing (or deleting) a relation forms the SQL database?  
(i) Delete (ii) Drop  
(iii) Remove (iv) All of the above
8. The term "DFD" stands for?  
(i) Data file diagram (ii) Data flow document  
(iii) Data flow diagram (iv) None of the above
9. What is the relation calculus?  
(i) It is a kind of procedural language (ii) It is a non-procedural language  
(iii) It is a high-level language (iv) It is Data Definition language
10. Which one of the following commands is used to modify a column inside a table?  
(i) Drop (ii) Update  
(iii) Alter (iv) Set

Cont...

**SECTION - B (25 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 5 = 25)

- 11 a. Prepare the Database System architecture with example.  
OR  
b. Write short notes on an Entity Relationship model.
- 12 a. List down the Oracle functions and Operators.  
OR  
b. Illustrate the PL/SQL block structure in detail.
- 13 a. Explain the formal definition of the relational algebra.  
OR  
b. Analyze the Boyce Codd normal form (BCNF) in detail.
- 14 a. State the Commit, Rollback and save point with example.  
OR  
b. Write an abstract about distributed Databases.
- 15 a. What is mean by linear hashing? Explain.  
OR  
b. Write short notes on properties of indexes.

**SECTION -C (40 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 8 = 40)

Question no.16 is Compulsory ~~Question~~

16. Compare and Contrast of different Data models.  
OR
- 17 a. Explain the Embedded SQL and Dynamic SQL.  
OR  
b. Write about the PL/SQL execution environment.
- 18 a. Explicate the fundamental operations of relational algebra.  
OR  
b. Discuss the different types of Normalization.
- 19 a. What is your understanding about transaction recovery? Explain.  
OR  
b. Explain the Locking protocols with example.
- 20 a. Explain the comparison of three file organization.  
OR  
b. Justify the Extendible versus Linear hashing in detail.

Z-Z-Z

END