

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

**BSc DEGREE EXAMINATION DECEMBER 2024
(Third Semester)**

**COMPUTER SCIENCE WITH DATA ANALYTICS
RELATIONAL DATABASE MANAGEMENT SYSTEMS**

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Choose the primary purpose of a database system. a) To provide a user-friendly interface b) To store and manage data efficiently c) To allow multiple users to access data simultaneously d) To create network connections	K1	CO1
	2	Choose which of the following is a component of a database architecture. a) Operating System b) Database Users c) Schema d) Query Processor	K2	CO1
2	3	In the E-R model, what does a 'relationship' represent? a) A connection between two entities b) A method of data storage c) A type of query d) A security feature	K1	CO2
	4	Choose the key concept in normalization from the following options. a) Reducing data redundancy b) Increasing database size c) Decreasing query speed d) Adding new entities	K2	CO2
3	5	Which SQL command is used to modify the structure of an existing table? a) MODIFY b) ALTER c) UPDATE d) CHANGE	K1	CO3
	6	What does the SELECT command do in SQL? a) Selects a database b) Retrieves data from a table c) Deletes data from a table d) Modifies table structure	K2	CO3
4	7	Which SQL feature is used to join tables together? a) MERGE b) JOIN c) LINK d) UNION	K1	CO4
	8	What is the main purpose of using views in SQL? a) To simplify complex queries b) To increase performance c) To replicate data d) To create backups	K2	CO4
5	9	What is a stored procedure in a database? a) A precompiled SQL query b) A function to modify data c) A set of SQL statements that can be executed as a program d) A type of database trigger	K1	CO5

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5	10	Which of the following is a key difference between stored procedures and stored functions? a) Functions must return a value, while procedures do not have to b) Procedures can return multiple values, while functions cannot c) Functions can be used in SELECT statements, procedures cannot d) All of the above	K2	CO5
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SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

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Module No.	Question No.	Question	K Level	CO
1	11.a.	Illustrate the role of a database administrator in a database system.	K2	CO1
	(OR)			
	11.b.	Outline the structure and components of a relational database.		
2	12.a.	Apply the steps involved in creating an Entity-Relationship (E-R) diagram.	K3	CO2
	(OR)			
	12.b.	Construct the process of normalization and its importance in database design.		
3	13.a.	List the various operations that can be performed using the SELECT command in SQL.	K4	CO3
	(OR)			
	13.b.	Categorize how SQL is used to modify the structure of a table with relevant examples.		
4	14.a.	Experiment with joins in SQL and provide examples of different types of joins.	K3	CO4
	(OR)			
	14.b.	Discuss the role of SELECT statement in VIEWS and how they can be used to simplify complex Queries.		
5	15.a.	Organize the steps involved in creating a stored procedure in a database.	K3	CO5
	(OR)			
	15.b.	Model the differences between stored procedures and stored functions, with examples.		

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Summarize the architecture of a database system, including its components and functions.	K2	CO1
2	17	Solve Entity-Relationship (E-R) model in detail, including its components, constraints, and the process of diagram creation.	K3	CO2
3	18	Inspect different types of SQL commands, focusing on SELECT, ALTER, and DELETE commands, with examples.	K4	CO3
4	19	Make use of data manipulation features of SQL, focusing on joins, subqueries, and indexes, with relevant examples.	K3	CO4
5	20	Enumerate the role of triggers in database management, including their creation, and deletion, with examples.	K3	CO5

Z-Z-Z END