Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD (now MoE)
Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination – November 2025
V Semester

Class: III UG **Time: 3 Hours**
Major: Computer Applications **Max. Marks: 100**

23BCAC09 Relational Database Management System

Course Outcomes:

CO1: Become familiar with the database management systems.
CO2: Describe the functional dependencies and design of the relational database.
CO3: Master the basics of SQL and construct queries using SQL.
CO4: Design a relational database schema using SQL for a given problem-domain.
CO5: Recognize the concept of concurrency control of database processing.

Part A **10 x 1 = 10**
Choose the Correct Answer

1. In the three-level database architecture, _____ level is closest to the end user. CO1 K1
   a. Internal Level b. Conceptual Level
   c. External Level d. Physical Level

2. The schema that describes the logical structure of the whole database is called _____ CO1 K2
   a. External schema b. Internal schema
   c. Conceptual schema d. Physical schema

3. Boyce-Codd Normal Form (BCNF) is a stronger version of _____ normal form CO2 K1
   a. 1NF b. 2NF
   c. 3NF d. 4NF

4. The _____ is a common concurrency control technique. CO2 K2
   a. Indexing b. Locking
   c. Denormalization d. Partitioning

5. The _____ SQL statement is used to retrieve data from a database. CO3 K1
   a. GET b. SELECT
   c. FETCH d. OPEN

6. The _____ SQL statement is used to modify existing data in a table. CO3 K2
   a. INSERT b. UPDATE
   c. MODIFY d. ALTER

7. The _____ is the default value of a declared PL/SQL variable if not initialized. CO4 K1
   a. 0 b. NULL
   c. Undefined d. False

8. The _____ statement is used to exit a loop prematurely in PL/SQL. CO4 K2
   a. RETURN b. STOP
   c. EXIT d. BREAK

9. The _____ keyword is used to exit a procedure prematurely. CO5 K1
   a. RETURN b. EXIT
   c. BREAK d. STOP

10. The _____ section of a stored procedure contains exception handling. CO5 K2
   a. DECLARE b. BEGIN
   c. EXCEPTION d. END

Part B **5 x 6 = 30**

Answer ALL Questions

Each answer should not exceed 400 words or two pages

11. a. Explain the different types of data models.	CO1 K1
(or)	
11.b. Enumerate and explain the structural constraints.	CO1 K2
12. a. State what functional dependencies are in the context of RDBMS.	CO2 K1
(or)	
12.b. Describe the timestamp ordering protocol.	CO2 K2
13. a. Examine the key features of SQL.	CO3 K1
(or)	
13.b. Discuss the role of aggregate functions.	CO3 K2
14. a. Discover the key features and components of PL/SQL.	CO4 K1
(or)	
14.b. Distinguish between the FOR loop and the WHILE loop in PL/SQL.	CO4 K2
15. a. Observe the structure and purpose of stored procedures.	CO5 K1
(or)	
15.b. Classify the different types of predefined exceptions in handling.	CO5 K2

Part C **5 x 12 = 60**

Answer ALL questions

Each answer should not exceed 800 words or four pages

16. a. Summarize the components of a database system environment.	CO1 K1
(or)	
16.b. Create a set of naming conventions and describe key design considerations for building a well-structured relational database.	CO1 K2
17. a. Evaluate the importance of primary keys in achieving various normal forms.	CO2 K1
(or)	
17.b. Justify the need for concurrency control techniques.	CO2 K2
18. a. Illustrate the role of Data Definition Language (DDL).	CO3 K1
(or)	
18.b. Prioritize the key functions of Data Control Language (DCL).	CO3 K2
19. a. Discriminate between different elements of the PL/SQL character set.	CO4 K1
(or)	
19.b. Compose a PL/SQL block that demonstrates the use of an explicit cursor to retrieve and process multiple rows from a database table.	CO4 K2
20. a. Sketch the interaction between the procedure and the function.	CO5 K1
(or)	
20.b. How triggers can enhance data integrity and automate business rules in an RDBMS environment.	CO5 K2

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