CBCS SCHEME

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22MCA21

Second Semester MCA Degree Examination, Dec.2023/Jan.2024
Database Management System

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	Discuss the main characteristics of the Database Approach.	8	L2	CO1
	b.	List and explain various data models used for Database design.	6	L2	CO1
	c.	Explain in detail about the three – tier schema architecture of DBMS.	6	L2	CO1
		OR			
Q.2	a.	Discuss the advantages of DBMS.	8	L2	CO1
	b.	List and explain different types of Database Users.	6	L2	CO1
	c.	Explain in detail about DBMS languages and interfaces.	6	L2	CO1
		Module – 2			
Q.3	a.	Explain aggregate function in relational algebra with example.	10	L2	CO2
	b.	Describe about the Unary and Binary relational operation with example.	10	L2	CO2
		OR			
Q.4	a.	Explain about the various notation used in ER diagram with example.	10	L2	CO2
	b.	With a neat example, describe the relational integrity constraint.	10	L2	CO2
		Module – 3			
Q.5	a.	Explain about the use of DDL in SQL statement.	10	L2	CO3
	b.	Describe SQL Data type and domains with an example.	10	L2	CO3
		OR			
Q.6	a.	Explain about the basic structure of select statement with all the clauses.	10	L2	CO3
	b.	Describe about view statement in SQL.	10	L2	CO3
		Module – 4			
Q.7	a.	Describe about the Informal guidelines for relational schemas.	10	L2	CO4
	b.	Explain properties of functional dependencies with example.	10	L2	CO4
		OR			

Q.8	a.	List and explain various type of Functional Dependencies in DBMS.	10	L2	CO4
	b.	Define Normalization. Explain about 1NF , 2NF and 3NF.	10	L2	CO4
Module – 5					
Q.9	a.	Define Transaction. Explain about ACID properties of transaction.	10	L2	CO5
	b.	What is Lock? Describe the two – phase locking protocol.	10	L2	CO5
OR					
Q.10	a.	Describe the concurrency control based on Timestamp ordering.	10	L2	CO5
	b.	Illustrate the Granularity of data items and Multiple Granularity locking.	10	L2	CO5

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