PRN:		Course Code :	AMT1404

Second-Year **AIML**. End Semester Examination SUMEMR- 2023

Database Management System

Day and Date: Tuesday, 20/06/2023 Max Marks: **100**

Time : 2.00 to 5.00 PM Duration: **03** hrs

Instructions: All questions are compulsory.

			Marks	Bloom's Level	CO
Q.1		**Attempt the following**			
	a)	Define concept of Relational model and explain it.	08	L1	CO1
	b)	Define Data Abstraction and explain levels with suitable diagram.	08	L1	CO1
		OR			
	b)	Memorize the types of database languages with all its commands and purposes of each.	08	L1	CO1
Q.2		**Attempt the following**			
	a)	Differentiate between Domain Relational Calculus and Tuple relational calculus.	08	L4	CO2
	b)	Memorize concept of system catalogue with its contents.	08	L1	CO2
		OR			CO2
	b)	List fundamental operations of Relational algebra. Explain any 3 with syntax and example.	08	L1	
Q.3		**Attempt any two from the following**			
	a)	Demonstrate the concept of Normalization upto BCNF with proper example.	08	L3	CO3
	b)	Discuss the concept of Multivalued dependency with a suitable example	08	L3	CO3
	c)	Find Decomposition is lossy or lossless for relation schema R(A,B,C,D) Functional dependency-a->B c->D for decomposition R1(A,B) and R2(C,D)	08	L3	CO3
Q.4		**Attempt any two of the following**			
	a)	Demonstrate different types of schedules in concurrency control.	08	L3	CO3
	b)	Explain Two-phase locking protocol with suitable example .	08	L2	CO3
	c)	Use the examples of concurrency control with optimistic method to achieve serializability.	08	L3	CO3
Q.5		**Attempt any Two of the following**			
	a)	Explain sequential file organization and b-tree file organization.	09	L2	CO3
	b)	Explain data dictionary storage and database buffer.	09	L2	CO3
	c)	Illustrate the concept of static and dynamic Hashing with example.	09	L2	CO3
Q.6		**Attempt any Two of the following**			
	a)	Illustrate Log based Recovery and Quick update method database management system.	09	L2	CO4
	b)	Explain failure classification storage recovery.	09	L2	CO4
	c)	Explain Atomicity Recovery Techniques in DBMS.	09	L2	CO4

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