Enrolment No/Seat No.: _____

R.N.G.PATEL INSTITUTE OF TECHNOLOGY-RNGPIT

(An Autonomous Institute U/s UGC Act 1956)

ONLINE MCA SEMESTER-I, SEMESTER END EXAMINATION – WINTER 2025

SUBJECT CODE:1MCA103 **DATE: 21-01-2026**

SUBJECT NAME: RELATIONAL DATABASE MANAGEMENT SYSTEMS

TIME: 09:00 AM to 11:00 AM **TOTAL MARKS: 50**

Instructions

1. It is **compulsory** for students to write **Enrolment No. /Seat No.** on the question paper.
2. Write answers of **Section A** and **Section B** in **separate answer books**.
3. Attempt all questions from both **Section A** and **Section B**.
4. Each section carries **25 marks**, with a total of **50 marks** for the examination.
5. The figures to the right of each question indicate full marks, make suitable assumptions with justification.
6. BL - Bloom's Taxonomy Levels (R-Remember, U-Understanding, A –Application, N –Analyse, E – Evaluate, C -Create), CO - Course Outcomes.

SECTION A

			Marks	BL	CO
Q.1	**(a)**	List and Explain disadvantages of File Processing System.	**05**	**R**	**1**
Q.2		**Attempt Any Two**	**[10]**		
	(a)	List and explain mapping cardinalities of E-R diagrams with example.	**05**	**R**	**2**
	(b)	Explain Primary key, Candidate key and Super key, Foreign Key.	**05**	**U**	**2**
	(c)	Explain Generalization and Specialization with examples.	**05**	**U**	**2**
Q.3		**Attempt Any Two**	**[10]**		
	(a)	List any four DDL commands.	**05**	**R**	**3**
	(b)	Explain the use of Group by & having clause with example.	**05**	**U**	**3**
	(c)	What is constraint? Explain the various constraints available with SQL with example.	**05**	**U**	**3**

SECTION B

			Marks	BL	CO
Q.4	**(a)**	Explain Structure of Relational Database and Relational Algebra with Operators and types of Joins.	**05**	**U**	**1**
Q.5		**Attempt Any Two**	**[10]**		
	(a)	Write about Query Processing and related measures of query cost, sorting, join, evaluation of expressions.	**05**	**U**	**4**
	(b)	Demonstrate the state transition diagram and explain ACID Properties.	**05**	**U**	**4**
	(c)	Explain Concurrency control and solve its problems with suitable examples.	**05**	**U**	**4**
Q.6		**Attempt Any Two**	**[10]**		
	(a)	Discuss Database Recovery, Security and different types of failure.	**05**	**U**	**5**
	(b)	With Example explain Cursors, Stored Procedures, Stored Function, and Triggers.	**05**	**A**	**5**
	(c)	Consider the following tables. CUST (cno, c_name, c_phone, Gen) ITEM (i_no, i_name, color, weight, expire_date, price) CUST_ITEM (cno, i_no, quantity_purchased) Write the SQL query for the following questions: i. Create Table Query [Any one table]. ii. Insert Query [Any one table Data Insertion] iii. Display customer with its item details. iv. List customer along with quantity of item purchased. v. Delete the items whose price is more than 4000.	**05**	**A**	**5**

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