DIBCS2503 **Name: .....**

Reg. No.: .....

FIRST SEMESTER B.Sc. FYUGP EXAMINATION NOVEMBER 2025

(Regular/Improvement/Supplementary)

COMPUTER SCIENCE & MATHEMATICS (Double Main)

MAJOR

CSC1CJ102: DATABASE MANAGEMENT SYSTEM

Time: 2 Hrs. **Maximum Marks: 70**

M: Mark BL: Bloom's Taxonomy Level (1 to 6) CO: Course Outcome

Section A: Answer all questions. Each carries 3 marks. Ceiling: 24 Marks				
No.	**Question**	**M**	**BL**	**CO**
1.	Comment on sophisticated users.	3	3	CO1 CO3 CO6
2.	Write any three applications of data base.	3	5	CO1 CO6
3.	Define the term schema.	3	1	CO1 CO3 CO6
4.	Write a short note on data independence.	3	6	CO1 CO3
5.	Domain constraints are user defined data type. Justify your answer.	3	5	CO2 CO3
6.	Differentiate between Drop and Delete command with example.	3	4	CO4
7.	Construct a simple SQL query to retrieve the names of all customer from a customer table.	3	6	CO4
8.	List out different states of transaction.	3	1	CO5
9.	Develop a strategy for ensuring atomicity and durability in a database system.	3	6	CO5
10.	Justify the use of two phase locking protocol in ensuring serializability.	3	5	CO5
Section B: Answer all questions. Each carries 6 marks. Ceiling: 36 Marks				
No.	**Question**	**M**	**BL**	**CO**
11.	Differentiate between data and information.	6	4	CO1
12.	Discuss three schema architecture.	6	4	CO1
13.	Explain about integrity rules in relational model.	6	2	CO2
14.	Construct a relational model from an ER model of a banking system.	6	6	CO2 CO3
15.	Demonstrate the use of join statement by writing a query that combines data from customers and orders to show all orders made by each customer.	6	3	CO4
16.	Compare Group By and HAVING clause with example.	6	4	CO4
17.	Write how Redis as a key value database , enhances application performance through its in-memory data storage and support for caching.	6	6	CO6
18.	Compare atomicity and isolation property with suitable examples?	6	4	CO5
Section C: Answer any one question. Each carries 10 marks. (1 x 10 = 10 Marks)				
No.	**Question**	**M**	**BL**	**CO**
19.	Discuss in detail about 2NF, 3NF and BCNF with examples.	10	1	CO2 CO3
20.	Explain simple locking and two phase locking in transaction?	10	2	CO5