

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: BCA
BRANCH: BCA**

**SEMESTER : III/ADD
SESSION : MO/2025**

SUBJECT: CA203 DATABASE MANAGEMENT SYSTEM

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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		CO	BL
Q.1(a)	What is Database Management System? Also explain advantages and disadvantages of Database Management System.	[5] 1	1
Q.1(b)	Explain Database Users. What are the responsibilities DBA?	[5] 1	2
Q.2(a)	What is the concept of Weak entity and Strong entity use in Data Modeling?	[5] 1	2
Q.2(b)	Draw an ER Diagram of Library Management System.	[5] 1	2
Q.3(a)	What is Functional Dependencies? Explain with proper example.	[5] 2	2
Q.3(b)	What is a Normalization? Also explain 2 NF, 3 NF and BCNF with proper example.	[5] 2	2
Q.4(a)	What is Query Processing? Also explain SELECT and JOIN operator.	[5] 2	2
Q.4(b)	Explain the transformation of Relational Expression.	[5] 2	2
Q.5(a)	What is ACID properties? Also explain Transaction State.	[5] 3	1
Q.5(b)	What is Deadlock? How can a deadlock be avoided?	[5] 3	2

:::20/11/2025:::M