

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

CLASS: BBA
BRANCH: BBA

SEMESTER : V
SESSION : MO/2024

SUBJECT: MT333 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.

		CO	BL
Q.1(a)	Discuss about Data Definition language and Data manipulation language?	[5]	1 3
Q.1(b)	Explain about Selection, Projection and Division operations in Relational algebra?	[5]	2 3
Q.2(a)	Define the following terms (i) Key (ii) Super Key (iii) Candidate Key (iv) Primary Key (v) Foreign Key	[5]	1 2
Q.2(b)	Write the design process of E-R model? Create E-R diagram for students information system?	[5]	2 2
Q.3(a)	What is functional dependency? Explain Trivial functional dependency and Multivalued functional dependency.	[5]	2 3
Q.3(b)	What is the lossless join property of decomposition? Why is it important?	[5]	3 4
Q.4(a)	What is normalization? Explain its need.	[5]	2 3
Q.4(b)	What are the conditions are required for a relation to be in 1NF, 2NF, 3NF & BCNF explain with example.	[5]	3 4
Q.5(a)	Discuss Transaction concept and their ACID Properties.	[5]	2 3
Q.5(b)	Explain in detail about serializability.	[5]	1 2

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