

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

**CLASS: B.TECH
BRANCH: CSE/IT**

**SEMESTER: V
SESSION: MO/2022**

SUBJECT: CS301 DATABASE MANAGEMENT SYSTEMS

TIME: 2 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 25.
 2. Candidates attempt for all 25 marks.
 3. Before attempting the question paper, be sure that you have got the correct question paper.
 4. The missing data, if any, may be assumed suitably.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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Q1 (a)	Explain the difference between logical and physical data independence.	[2]	CO1	BL
Q1 (b)	Discuss the main characteristics of database approach and how it differs from traditional file systems.	[3]	CO1	K2
Q2	What do you mean by data abstraction, views, data model, DDL and DML. Discuss all its types.	[5]	CO1	K1
Q3	Draw an ER diagram pertaining to the following data: Dept (dept_code, name, hod_name, location) University (roll, name, address, phone, degree, cno) Course (cno, cname, sem_no, semhrs, dept_code) Course is linked with university by cno and Dept is linked with Course by dept_code. Assume relationship between university & Course is many-to-many and relationship between Course & Dept is many-to-one. Draw an E-R diagram for above schema. Also reduce it into appropriate tables.	[5]	CO2	K5
Q4	Explain the concepts of generalization & specialization with appropriate examples.	[5]	CO2	K2
Q5	Illustrate the differences with example between a) weak & strong entity sets b) Primary key & foreign key, Super key & Candidate key	[5]	CO2	K4

::: 26/09/2022 :::M