



LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

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L.B.REDDY NAGAR, MYLAVARAM. NTR District, AP, India. 521230.

hodads@lbrce.ac.in, ads@lbrce.ac.in, Phone: 08659-222933, Fax: 08659-222931

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

ASSIGNMENT QUESTIONS

Name of Course Instructor: Dr O Rama Devi
Course Name & Code : DBMS & 20CS03
L-T-P Structure : 3-0-0
Program/Sem/Sec : B.Tech/III/A&B

Reg: 23
Cycle: 2
Credits: 3
A.Y: 2025-26

Q.No	Question Description	Unit #	CO#	BL
1	Demonstrate the use of integrity constraints by creating the Sailors and Reservers tables with PRIMARY KEY and FOREIGN KEY constraints.	3	3	3
2	Construct a relation schema and write queries for following in SQL and Relational algebra form? Sailors (sid, sname, rating, age) Boats (bid, bname, colour) Reservers (sid, bid, day) i) Find the names of sailors who have reserved boat 103. ii) Find the Sid, names of sailors who have reserved a red boat.	3	3	4
3	Consider the following schema: Suppliers(sid: integer, sname: string, address: string) Parts(pid: integer, pname: string, color: string) Catalog(sid: integer, pid: integer, cost: real) Write the SQL queries for the following: i) Find the names of suppliers who supply some red part. ii) Find the sids of suppliers who supply some red or green part. iii) Find the sids of suppliers who supply some red part or are at 221 Packer Street. iv) Find the sids of suppliers who supply some red part and some green part v) Find the second Youngest supplier who supply green part.	3	3	3
4	Transform a given unnormalized table into 1NF, 2NF, and 3NF with suitable examples.	4	4	3
5	Analyze the structure of a relation and explain how 4NF eliminates multi-valued dependencies.	4	4	4

6	Examine a sample schema to identify functional dependencies and justify their classification.	4	4	3
7	Apply ACID properties to a transaction and explain how each property ensures database consistency	5	5	3
8	Apply Two-Phase Locking techniques to manage concurrent transactions and ensure serializability	5	5	3
9	Apply the transaction state model to describe the typical states a transaction goes through, using a state diagram	5	5	3
10	Use time-stamping protocols to resolve concurrency issues in a multi-transaction environment	5	5	3

Title	Course Instructor	Course Coordinator	Module Coordinator	Head of the Department
Name of the Faculty	Dr.O.Rama Devi	Dr.O.Rama Devi	Dr D.Srinivasa Rao	Dr.P Bhagath
Signature				