

ANDHRA LOYOLA INSTITUTE OF ENGINEERING AND
TECHNOLOGY VIJAYAWADA-8
ACADEMIC YEAR: 2022-2023

YEAR: II BTECH
CS E -
SEMESTER:
SUBJECT NAME:
**DATA BASE
MANAGEMENT
SYSTEM**

REGULATION: R20

Cognitive levels

L1- Remember, L2-Understanding, L3- Applying / Analyzing

Question – Bank

Q.No	Question	Marks	Cognitive level
UNIT – 1			
1	Explain the characteristics of database systems	10M	L2
2	State four advantages of DBMS over file processing system	10M	L2
3	With a neat diagram, explain the structure of Database Management System	10M	L1
4	Explain the client server architecture for the database with necessary diagram.	10M	L2
5	Explain Data Independence and its types in detail.	10M	L1
6	Explain different types of database users.	10M	L2
7	What is a Database model? List out various database models and explain them	10M	L1
8	Define Schema. Explain three level architecture in DBMS	10M	L1
9	Define Data Abstraction and discuss levels of Abstraction?	10M	L1
UNIT-2			
1	Explain: (i) Database (ii) Meta data (iii) Data Dictionary (iv) user constraints (v) check constrain	10M	L1
2	Explain about constraints in detail with examples	10M	L2
3	What is the importance of NULL values in a database?	5M	L1
4	Demonstrate how to add a NOT NULL column to a table?	5M	L3
5	Explain aggregate functions with examples?	5M	L1
6	Discuss about data types in SQL	5M	L1
7	Discuss about types of database languages in SQL	10M	L1
8	Discuss about SQL functions.	10M	L1
9	Demonstrate how a table structure is modified in SQL	10M	L3
10	Demonstrate different DML operations in SQL	10M	L3

11	<p>Write SQL query for following consider table EMP(empno , deptno, ename ,salary, Designation, joiningdate, DOB,city)</p> <p>i) Display names of employees whose experience is more than 10 years</p> <p>ii) Display age of employees</p>	5M	L3
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	iii) Display average salary of all employee iv) Display name of employee who earned highest salary		
UNIT-3			
1	Define the following terminology with examples i) entity ii) entity set iii) relationship iv) relationship set v) cardinality	10M	L1
2	Explain about different types of attributes in the relational model.	10M	L1
3	Explain different symbols used in E-R model with example	10M	L2
4	Discuss additional features of the ER-Models	10M	L2
5	Draw ER diagram for Ternary Relationship set with suitable example?	5M	L2
6	Discuss the representation of total participation and multivalued attribute in an E/R diagram.	5M	L2
7	Discuss about key constraints for Ternary Relationships?	5M	L2
8	Draw an ER diagram of Company based on the following description : <ul style="list-style-type: none"> • Company has several departments. • Each department may have several Location. • Departments are identified by a name, D_no, Location. • A Manager control a particular department. • Each department is associated with number of projects. • Employees are identified by name, id, address, dob, date_of_joining. • An employee works in only one department but can work on several project. • We also keep track of number of hours worked by an employee on a single project. • Each employee has dependent • Dependent has D_name, Gender and relationship. 	10M	L3
9	Distinguish strong entity set with weak entity set? Draw an ER diagram to illustrate weak entity set.	10M	L3

UNIT-4

SNO	Question	Marks	Level
1	Explain insertion, deletion, and modification anomalies with examples	5M	L2
2	What is Functional Dependency? Explain types of FD's.	5M	L1
3	Differentiate between Third normal form and BCNF normal form.	5M	L3
4	Explain briefly about 1NF, 2NF, 3NF with suitable examples?	10M	L2

5	Explain about Boyce Codd normal form with an example.	5M	L2
6	Explain 4NF and 5NF with examples	10M	L2
7	List and explain the inference rules of functional dependencies.	5M	L1
8	Explain about Lossless join and dependency preserving Decomposition	5M	L3
9	Explain about dependency preservation property for decomposition? Explain why it is important.	5M	L2
10	Describe about lossless join decomposition? Explain the same with an example.	5M	L2

UNIT-5

<u>SNO</u>	<u>Question</u>	<u>Marks</u>	<u>Level</u>
1	Explain ACID properties of transaction in Detail	5M	L2
2	Explain different states of transactions with Diagram	5M	L2
3	Shadow-copy technique for atomicity and durability	5M	L2
4	Demonstrate the implementation of B+ trees	10M	L2
5	Discuss about conflict serializability with example	5M	L2
6	Discuss about view serializability with example	5M	L2
7	Explain Hash-Based Indexing in detail.	5M	L2
8	Write short notes on: i) Primary index ii) Clustered index iii) Secondary index.	10M	L1