KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES
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Programme : B.Tech **Academic Year**: 2025-26
Year / Semester **:** II / II
Branch / Section : IT/CSE
Course Code : 23CD4T02
Subject : Database Management System

QUESTION BANK FOR MID-I

UNIT-1
Short answer questions

Q. No.	Question	M	CO	LL
1	Define DBMS. List out any two advantages of a Database System	2	C305.4	LL1
2	Define File System. List out any two disadvantages of File System	2	C305.4	LL1
3	Define Database System. List out various database applications.	2	C305.4	LL1
4	State different types of Database Users	2	C305.4	LL1
5	State the different responsibilities of Database Administrator (DBA).	2	C305.4	LL1
6	Define Data Model. List out different Data Models.	2	C305.4	LL1
7	Define Schema and Instance. Define Schema. and explain it with an example. Define Instance and explain it with an example.	2	C305.4	LL2
8	Define Data Independence.	2	C305.4	LL1
9	Define Data Dictionary	2	C305.4	LL1
10	State the components of Query Processor or Define Storage Manager	2	C305.4	LL1

Essay questions

Q. No.		Question	M	CO	LL
1	a	Explain the Characteristics of DBMS?	6	C305.5	LL2
	b	Explain the drawbacks of File Processing System	6	C305.5	LL2
2	a	Define DBMS. Explain the advantages of DBMS	6	C305.5	LL2
	b	Discuss the different types of database users.	6	C305.5	LL2
3	a	Explain various Applications of DBMS	6	C305.5	LL3
	b	Explain the Hierarchical Data Model and Network Data Model with a suitable example	6	C305.5	LL2
4	a	Describe ER-Model with a suitable example	6	C305.5	LL2
	b	Explain Relational Data Model with a suitable example	6	C305.5	LL2
5	a	Explain the three-tier schema architecture of DBMS with a neat diagram.	6	C305.5	LL2
	b	Briefly explain the three-tier schema architecture for the data independence	6	C305.5	LL2
6	a	Compare the differences between a traditional file system and DBMS	6	C305.5	LL2
	b	Explain database system structure.	6	C305.5	LL2

UNIT-2
Short answer questions

Q. No.	Question	M	CO	LL
1	Define terms domain, attributes, tuple in a relational Define Relation in DBMS. Explain with an example.	2	C305.4	LL1

	Define Domain in DBMS. Explain with an example. Define Tuple and Attribute in DBMS.			
2	Define the properties of a Relation.	**2**	C305.4	LL1
3	State the importance of NULL values in a database.	**2**	C305.4	LL1
4	State the importance of constraints in Relational Model	**2**	C305.4	LL1
5	Define Primary Key Constraint.	**2**	C305.4	LL1
6	Define Foreign Key Constraint. List the common SQL data types.	**2**	C305.4	LL2
7	State the purpose of the WHERE clause in SQL.	**2**	C305.4	LL2
8	Compare DROP, TRUNCATE, and DELETE commands in SQL.	**2**	C305.4	LL2
9	Difference between selection and projection. State the purpose of the ALTER command in SQL	**2**	C305.4	LL1
10	State the use of the LIKE operator. State the SQL command used to create a table called EMPLOYEE with ENO, ENAME, SAL, and DOB attributes. State the SQL command used to add a new column Email of type VARCHAR2(20) to an existing table named student. State the SQL command to retrieve all employees whose first name starts with 'A'.	**2**	C305.4	LL2

Essay questions

Q. No.		Question	M	CO	LL
1	**a**	Elaborate the relational model of database system in detail with an example or Discuss different terms used in Relational database. Explain with examples Or Define a relation, attributes, domain, tuple, degree, cardinality in the relational model	**6**	C305.4	LL2
	b	State and explain about different Key Constraints with suitable examples	**6**	C305.4	LL3
2	**a**	Discuss about Domain and Integrity Constraints in relational model	**6**	C305.4	LL2
	b	Explain different SQL data types with suitable examples.	**6**	C305.4	LL2
3	**a**	Discuss DDL Commands with examples in SQL.	**6**	C305.4	LL2
	b	Demonstrate the usage of all DML Commands with examples Explain various DML operations in SQL with examples* State and explain various DML Commands with syntax and examples	**6**	C305.4	LL2
4	**a**	Explain basic SQL querying using SELECT and PROJECT operations with the help of WHERE clause.	**6**	C305.4	LL2
	b	Explain various Arithmetic and Logical operators in SQL with suitable examples.	**6**	C305.4	LL2
5	**a**	Explain various Date functions with a suitable example. Describe various SQL functions with examples. Explain various Character Functions in SQL with suitable examples.	**6**	C305.4	LL2
	b	Or Consider the following database schema: EMPLOYEE(eno INT,ename VARCHAR(50),salary NUMBER,dept VARCHAR(20))	**6**	C305.4	LL2

		Write SQL queries for the following: a. Get the salary details of employees who are working in the 'clerk' department. b. Get the details of employees who are working in both 'clerk' and 'salesman' departments. c. Get the salary details of employees who are NOT working in the 'salesman' department. d. Get the names of employees whose salary is between 10000 and 50000. e. Get the names of employees whose employee number (eno) is 101, 102, or 103. f. Display all details of employees whose second letter in the name is 'b'. g. Display details of employees whose first letter is 'A' and third letter is 'd'.			
6	**a**	Consider the following database schema: STUDENT (rollno INT, name VARCHAR(50), marks INT, deptno INT) DEPT (deptno INT, dname VARCHAR(50)) Answer the following using SQL: a) Add a PRIMARY KEY constraint to the deptno column of the DEPT table. b) Add a PRIMARY KEY constraint to the rollno column of the STUDENT table. c) Add a FOREIGN KEY constraint on the deptno column of the STUDENT table referencing the DEPT table. d) Add a new column email of type VARCHAR(50) to the STUDENT table. e) Rename the column name to sname in the STUDENT table. f) Modify the size of the sname column to VARCHAR(100) in the STUDENT table. g) Drop the column marks from the STUDENT table.	**6**	C305.4	LL2
	b	Consider the following schema: DEPT (deptno INT, dname VARCHAR, loc VARCHAR) EMP (empno INT, ename VARCHAR, job VARCHAR, sal NUMBER, deptno INT) Write SQL queries for the following: i) Insert a new department with department number 50, name as 'HR', and location as 'Hyderabad'. ii) Insert a new employee with employee number 9001, name 'Ravi', job 'Clerk', salary 1500, and department number 10. iii) Update the salary of employee number 7844 to 2000. iv) Delete all employees who belong to department number 30. v) List all employee details who belong to department number 10 and whose job is 'Clerk'. vi) Display employee number, employee name, department name, and location of all employees.	**6**	C305.4	LL2

Q. No.	Question	M	CO	LL
1	Define Entity and Entity Set. Define Entity and attributes Or Define Strong Entity and Weak Entity	**2**	C305.3	LL1
2	Define Attributes. Define Multivalued Attribute, Composite Attribute Define Relationship. List different types of relationships.	**2**	C305.3	LL1

3	Define Participation Constraints in ER model Define Total Participation Constraint and Partial Participation Constraint.	**2**	C305.3	LL1
4	Define IS-A Relationship in ER Model	**2**	C305.3	LL1
5	Define Generalization in ER Model. Define Specialization in ER Model.	**2**	C305.3	LL1

Q. No.	Question	M	CO	LL
1	Discuss the basic concepts of the ER-Model with suitable examples.	**6**	C305.3	LL2
2	Discuss about Degrees of Relationship with clear examples.	**6**	C305.3	LL3
3	Discuss various constraints in the ER model with suitable examples.	**6**	C305.3	LL3
4	Demonstrate the ER-Diagram for Banking System.	**6**	C305.3	LL3
5	Design and draw an ER diagram that captures the information about the university. Use only the basic ER model here, that is, entities, relationships, and attributes. Indicate key and participation constraints OR Construct an E-R diagram for a company database that has to be designed to keep track of employees, departments, and projects. The database should also be able to keep track of the dependents of each employee for medical purposes. You can make appropriate entities, attributes, entity set, relationship, constraints to make the specification complete.	**6**	C305.3	LL2
6	Illustrate/Demonstrate the following for entity-relationship diagrams Specialization Generalization or Demonstrate Specialization and Generalization with suitable examples	**6**	C305.3	LL2

Course Coordinator **Module Coordinator** **Programme Coordinator**

Coordinator IQAC