

Department of CSE(DS)

B. Tech Mid Question Bank (R22 Regulation)

Academic Year: 2024-25

Semester: V

Subject Name: DBMS

Faculty Name: B Mohan Babu

PART-A

MID-I Questions					
Q.No	Questions	Marks	BL	CO	Unit No
1	Define Database and Database management Systems.	2M	BL1	CO1	I
2	Define the following i)Entity. ii) Attribute. iii) Entity set	2M	BL1	CO1	I
3	Define data model and list types of data models.	2M	BL1	CO1	I
4	Write list of advantages in DBMS.	2M	BL2	CO1	I
5	Describe the Relationship set and explain types of Relationship set.	2M	BL2	CO1	I
6	List the types of attributes.	2M	BL2	CO1	I
7	Write a short note on the relational model.	2M	BL2	CO2	II
8	Give examples of selection and projection operations in relational algebra.	2M	BL1	CO2	II
9	Write queries for. i). Insert ii). Update	2M	BL2	CO2	II
10	Define data model and list types of data models.	2M	BL3	CO2	II
11	Define Integrity Constraints.	2M	BL1	CO2	II
12	Define Calculus. List types of relational calculus.	2M	BL2	CO2	II
13	Write Aggregation Operators in E-R model.	2M	BL2	CO3	III
14	List the Types of Set Operations.	2M	BL2	CO3	III
15	Write a SQL Query for creating a table with Primary Key, Unique Key, Not Null, and Default value constraints.	2M	BL3	CO3	III
MID-II Questions					
16	Demonstrate transitive dependency. Give an example.	2M	BL3	CO3	III
17	Discuss Normalization.	2M	BL1	CO3	III
18	Explain about Loss less-join dependency.	2M	BL3	CO3	III
19	Define Two Phase Commit Protocol.	2M	BL2	CO4	IV
20	List the properties of transaction.	2M	BL1	CO4	IV
21	Define a Transaction.	2M	BL2	CO4	IV
22	List out ACID properties.	2M	BL3	CO4	IV
23	Discuss about View Serializability.	2M	BL3	CO4	IV
24	Discuss about Conflict Serializability.	2M	BL3	CO4	IV
25	Define ISAM.	2M	BL1	CO5	V
26	What is an index? Give an example.	2M	BL2	CO5	V
27	What is meant by secondary index?	2M	BL1	CO5	V
28	Define B+ tree index file/	2M	BL2	CO5	V
29	Discuss about primary indexes.	2M	BL1	CO5	V
30	Discuss about Clustered indexes.	2M	BL2	CO5	V

PART-B

MID-I Questions					
Q.No	Questions	Marks	BL	CO	Unit No
1	Briefly explain about architecture of DBMS.	3M	BL1	CO1	I
2	Explain Levels of Abstraction in a DBMS.	3M	BL2	CO1	I
3	Differentiate between database systems and file systems.	3M	BL3	CO1	I
4	Give a brief history of database systems.	3M	BL1	CO1	I
5	Write about various database system applications in detail.	3M	BL4	CO1	I
6	Explain Additional Features of the ER Model.	3M	BL1	CO1	I
7	What is an attribute and explain types of attributes with examples?	6M	BL2	CO1	I
8	Construct an ER diagram for the bank database. (Bank maintains data about customers, their loans, their deposits, lockers etc. Determine the entities and their relationships.).	6M	BL2	CO1	I
9	Define the following i. Entity. ii) Attribute. iii) Mapping Cardinalities? Construct a conceptual design with E-R Model (University Database)?	6M	BL6	CO1	I
10	Discuss various types of integrity constraints over Relations.	3M	BL2	CO2	II
11	Explain Join Operations in Relational Algebra with suitable examples.	3M	BL2	CO2	II
12	Explain Domain Relational Calculus (DRC) with examples.	3M	BL2	CO2	II
13	Explain following Relational Algebra Operations with examples. i. Projection ii. Selection	3M	BL3	CO2	II
14	Explain set operators in Relational Algebra.	3M	BL2	CO2	II
15	Explain logical data base design with examples.	3M	BL3	CO2	II
16	Write queries for i. Create View. ii. Update View. iii. Delete View	6M	BL3	CO2	II
17	Write Relational Algebra Queries for the following (for Sailors Database) Sailors(sid,sname,rating,age), Boats(bid,bname,color), Reserves(sid,bid,day). Find the Sailor id's with age over 20 and who have not reserved a red boat. Find the names of Sailors who reserved boat 103	6M	BL4	CO2	II
18	Discuss correlated nested queries.	6M	BL3	CO2	II
19	Consider the following relational schema. <i>Student (id, name, age, city)</i> Retrieve the names of all students. Display the id's of all students who are having age above 20. Display the names and id's of all students who are having age between 20 and 25 and lives in Hyderabad city.	3M	BL3	CO3	III
20	Discuss various DDL commands with examples in SQL.	3M	BL3	CO3	III

21	Discuss various DML commands with examples in SQL.	3M	BL2	CO3	III
MID-II Questions					
22	What is normalization? Explain with examples.	3M	BL3	CO3	III
23	What is meant by functional dependencies? Discuss about Third Normal Form?	3M	BL3	CO3	III
24	Write the aggregate operators in SQL.	3M	BL2	CO3	III
25	Explain in detail about the two-phase locking protocol.	3M	BL2	CO4	IV
26	Explain about remote backup systems.	3M	BL2	CO4	IV
27	Explain in detail about Validation-Based Protocols.	3M	BL2	CO4	IV
28	Discuss about failure with loss of non-volatile storage.	3M	BL3	CO4	IV
29	Explain in detail about Timestamp-Based Protocols.	3M	BL2	CO4	IV
30	What is transaction? Explain the ACID Properties of transactions?	3M	BL3	CO4	IV
31	What is a composite search key? What are the pros and cons of composite searchkeys?	6M	BL3	CO4	IV
32	Explain in detail about Serializability.	6M	BL4	CO4	IV
33	Explain in detail about Lock-Based Protocols.	6M	BL3	CO4	IV
34	What are the indexed data structures? Explain in detail.	3M	BL2	CO5	V
35	Explain about Hash based Indexing and Tree based Indexing.	3M	BL2	CO5	V
36	Explain insertion and deletion operation in B+ trees.	3M	BL2	CO5	V
37	Explain static hashing.	3M	BL3	CO5	V
38	Explain Extendible hashing.	3M	BL2	CO5	V
39	What are the different RAID levels? Explain.	3M	BL3	CO5	V
40	What is an index? Discuss about primary and Clustered indexes.	6M	BL3	CO5	V
41	Explain B+ trees. Discuss about this Dynamic Index Structure.	6M	BL4	CO5	V
42	Explain in detail about ISAM.	6M	BL3	CO5	V