

St. Peter's Engineering College (Autonomous) Dullapally (P), Medchal, Hyderabad – 500100. QUESTION BANK				Dept.	:	CSG- AIDS- AIML
				Academic Year 2024-25		
Subject Code	:	AS22-05PC07	Subject	:	DATABASE MANAGEMENT SYSTEMS (DBMS)	
Class/Section	:	B. Tech.	Year	:	II	Semester : II

BLOOMS LEVEL					
Remember	L1	Understand	L2	Apply	L3
Analyze	L4	Evaluate	L5	Create	L6

Q. No	Question (s)	Marks	BL
UNIT - I			
1	a) What is Data Redundancy?	1M	L1
	b) What are the different levels of abstraction in DBMS?	1M	L1
	c) Define Query Processing.	1M	L1
	d) What is Entity Set?	1M	L1
	e) Explain Requirements Analysis.	1M	L1
2	a) Discuss about the benefits of levels of abstraction in DBMS.	3M	L2
	b) Explain about the Logical Data Independence.	3M	L2
	c) Discuss about the different types of relationship in ER model	3M	L2
	d) Write a short note on Relational Model.	3M	L2
	e) Explain about the Database Development Life Cycle.	3M	L2
3	a) Differentiate between database Management system and File systems?	5M	L2
	b) Explain in brief about Data Independence?	5M	L2
	c) Briefly explain about Database Design in DBMS.	5M	L2
	d) Explain about different types of attributes in Entity Relationship Model.	5M	L2

	e) Discuss about levels of abstraction in DBMS.	5M	L2	
4	a) Briefly explain about different types of Data Model?	10M	L2	
	b) Explain the structure of DBMS with a neat diagram?	10M	L2	
	c) Briefly discuss about the ER diagram in DBMS.	10M	L2	

Q. No	Question (s)	Marks	BL	
UNIT - II				
1	a) Define Foreign Key.	1M	L1	
	b) What is RDBMS?	1M	L1	
	c) What is SQL Aliases?	1M	L1	
	d) What are the types of Views?	1M	L1	
	e) What is BCNF?	1M	L1	
2	a) What are the ways to Enforce Integrity Constraints?	3M	L2	
	b) Discuss about the Relational Calculus in DBMS.	3M	L2	
	c) Write a short note on Relational Algebra.	3M	L2	
	d) Explain about the different types of Views.	3M	L2	
	e) What are the advantages of Logical Database?	3M	L2	
3	a) Discuss about Enforcing Integrity Constraints?	5M	L2	
	b) What are the advantages & disadvantages of Relational Database Model?	5M	L2	
	c) Explain any FIVE commands in SQL?	5M	L3	
	d) Discuss about Querying Relational Data in DBMS.	5M	L2	
	e) Write a short note on SQL Aliases.	5M	L2	

4	a) Briefly explain in detail about Normalization.	10M	L2	Q 2
	b) Discuss about the concept of Logical Database.	10M	L2	Q 2
	c) Discuss about Integrity Constraint Over Relations.	10M	L2	Q 2

Q. No	Question (s)	Marks	BLSR	22CO
UNIT - III				
1	a) What is Null Values?	1M	L1	C224. 3
	b) What are the types of SQL Server Triggers?	1M	L1	C224. 3
	c) What are the types of SQL Aggregation Function?	1M	L1	C224. 3
	d) What is Active Databases?	1M	L1	C224. 3
	e) Describe the use of GROUP BY with a query.	1M	L2	C224. 3
2	a) Give an overview of types of normal forms.	3M	L2	C224. 3
	b) What are the problems caused due to redundancy in database?	3M	L2	C224. 3
	c) Write about the features of Active Database.	3M	L2	C224. 3
	d) What are the disadvantages of Triggers?	3M	L2	C224. 3
	e) Write a Short Note on SQL Constraints.	3M	L2	C224. 3
3	a) Explain the concept of Active Databases.	5M	L2	C224. 3
	b) Explain in detail about Nested Queries in SQL.	5M	L3	C224. 3
	c) Write about Decomposition & its problems in DBMS.	5M	L2	C224. 3
	d) Describe about 1st Normal form?	5M	L2	C224. 3
	e) Write a short note on Functional Dependency.	5M	L2	C224. 3
4	a) Briefly explain about types of SQL commands.	10M	L3	C224. 3
	b) Discuss about the Aggregation Function in DBMS.	10M	L3	C224. 3
	c) Explain briefly about the Triggers in SQL Server.	10M	L3	C224. 3

Q. No	Question (s)	Marks	BL	CO
UNIT - IV				
1	a) What is Granularity?	1M	L1	C224. 4
	b) Define Atomicity.	1M	L1	C224. 4
	c) What is a Transaction give an example?	1M	L1	C224. 4
	d) What are the Techniques to implement Durability?	1M	L1	C224. 4
	e) What is Serializability?	1M	L1	C224. 4
2	a) Explain about conflict Serializability.	3M	L2	C224. 4
	b) Write a short note on Isolation in DBMS.	3M	L2	C224. 4
	c) Discuss about the phases of Validation based Protocol.	3M	L2	C224. 4
	d) What are the common techniques used by DBMS to implement Atomicity & Durability.	3M	L2	C224. 4
	e) Write about the Strict Two-Phase Locking in DBMS.	3M	L2	C224. 4
3	a) Write short note on Multiple Granularity.	5M	L2	C224. 4
	b) Draw transaction state diagram and describe each state that a transaction goes through during its execution.	5M	L2	C224. 4
	c) Discuss about types & testing of Serializability.	5M	L2	C224. 4
	d) Explain about Recovery with Concurrent Transactions.	5M	L2	C224. 4
	e) Write about the Concurrent Executions in DBMS.	5M	L2	C224. 4
4	a) Discuss in detail about ACID properties of a transaction.	10M	L2	C224. 4
	b) Explain in detail about the Implementation of Atomicity & Durability in DBMS.	10M	L2	C224. 4
	c) What is need of lock in DBMS? Explain Lock based Protocols, Timestamp-based protocol & Validation based Protocol in DBMS.	10M	L2	C224. 4

Q. No	Question (s)	Marks	BL	CO
UNIT - V				
1	a) What is an Index?	1M	L1	SR 22, C224.5
	b) Write any three types of File organizations?	1M	L1	C224.5
	c) What is File?	1M	L1	C224.5
	d) What are the types of Storage?	1M	L1	C224.5
	e) What is ISAM?	1M	L1	C224.5
2	a) Write about the advantages & disadvantages of Indexed File Organization.	3M	L2	C224.5
	b) Why we need Tree Based Indexing?	3M	L2	C224.5
	c) Write a short note on Performance Tuning.	3M	L2	C224.5
	d) Explain about the components of Indexed Sequential Access Method.	3M	L2	C224.5
	e) What are the Pros & Cons of Hash-Based Indexing?	3M	L2	C224.5
3	a) Explain in detail about Data on External Storage in DBMS.	5M	L2	C224.5
	b) Write in detail about ISAM.	5M	L2	C224.5
	c) Write about Primary and Secondary Indexes.	5M	L2	C224.5
	d) Compare any two File Organizations.	5M	L2	C224.5
	e) Write a note on Cluster Indexes in DBMS.	5M	L2	C224.5
4	a) Discuss about the File Organization and Indexing in DBMS.	10M	L2	C224.5
	b) Briefly explain about Dynamic Index Structure - B+ Tree	10M	L2	C224.5
	c) Write about the Index Data Structures in DBMS.	10M	L2	C224.5