

Day and Date: Monday, 12/12/2022

Time: 10.00 am to 12.00 pm.

Seat No:

Max. Marks- 50

Instructions:

- Question No. 1&2 is compulsory.
- Figure to the right indicate full marks.

BT	CO's	Q. No.		Marks
		Q.1	All Questions are compulsory	20 M
2	CO1	a	Define Data Abstraction and explain the levels of abstraction in detail.	6M
3	CO3	b	Consider the following schema. account (account-number, branch-name, balance) Write the SQL queries for following 1. Find the balance of account numbers in between '111' and '120'. 2. List entire account relation in ascending order by account number. 3. Find the total account balance at each branch. 4. Find those branches' having total balance is greater than 20000. 5. Find the average, minimum, maximum, total account balance. 6. Find the average, minimum, maximum, total account balance at each branch. 7. Find those branches whose name starts with 'K'.	7 M
2	CO3	c	Explain Set operations and Aggregate functions in SQL with example.	7 M
		Q.2	All Questions are compulsory	10 M
2	CO4	a	Differentiate Between Dense Index and Sparse Index.	4 M
2	CO4	b	Explain Static hashing in detail. OR Describe Multiple key access.	6 M
		Q.3	All Questions are compulsory	10
2	CO5	a	Define log and explain different types of log records. OR Explain Transaction State Diagram in detail.	3 M
2	CO5	b	Explain two phase locking protocol with example. Give its advantages and disadvantages.	7 M
		Q.4	Attempt any two out of three questions	10 M
2	CO5	a	Explain the concept of shadow paging.	5 M
2	CO6	b	Explain Discretionary Access Control.	5 M
2	CO6	C	Explain the security issues in DBMS.	5 M
