DATABASE MANAGEMENT SYSTEM (25CS305)
Unit Wise Question Bank

UNIT–V

S. No	Questions	BT	CO	PO
	Part –A(Short Answer Questions)			
1	Define a transaction in DBMS?	L1	CO5	PO1
2	List and explain the different states of a transaction?	L2	CO5	PO2
3	What is meant by atomicity and durability in transaction processing?	L2	CO5	PO2
4	Define concurrent execution and mention its advantages?	L1	CO5	PO1
5	What is serializability? Why is it important in concurrency control?	L2	CO5	PO1
6	Define recoverability in transaction management?	L1	CO5	PO2
7	What is a lock-based protocol? Give an example?	L2	CO5	PO5
8	Explain the basic principle of timestamp-based concurrency control?	L2	CO5	PO6
9	What is shadow paging in recovery systems?	L1	CO5	PO2
10	Define buffer management and state its role in recovery systems?	L2	CO5	PO2
	Part– B(Long Answer Questions)			
a)	Explain the transaction concept and describe the various transaction states with a neat state transition diagram?	L2	CO5	PO1
b)	Discuss the implementation of atomicity and durability in DBMS transaction processing?.	L2	CO5	PO1
a)	Explain concurrent execution of transactions and analyze its advantages and disadvantages?	L4	CO5	PO2
b)	Describe serializability and explain conflict serializability and view serializability with suitable examples?	L4	CO5	PO1
a)	Discuss recoverability in transaction processing and explain different types of recoverable schedules?	L2	CO5	PO1
b)	Explain the implementation of isolation in DBMS and discuss methods used for testing serializability?	L3	CO5	PO2
a)	Compare lock-based protocols, timestamp-based protocols, and validation-based protocols used in concurrency control.?	L4	CO5	PO5
b)	Explain Two-Phase Locking (2PL) protocol and discuss its advantages and limitations in concurrency control?	L2	CO5	PO1
a)	Describe log-based recovery techniques and explain how recovery is performed in the presence of concurrent transactions?	L2	CO5	PO1
b)	Compare log-based recovery and shadow paging techniques. Discuss the role of buffer management in database recovery.	L4	CO5	PO1