Printed Pages: 3 **NMCAE41**

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 2014091 **Roll No.** | | | | | | | | | | |

MCA

Regular Theory Examination (Odd Sem-V), 2016-17

ADVANCE DATABASE MANAGEMENT SYSTEMS

Time : 3 Hours ***Max. Marks : 100***

Section - A

1. Attempt all parts. All parts carry equal marks. Write answer of each part in short. (10×2=20)

a. Concurrent Executions is important for transaction, Justify.

b. What effects is caused by Cascading Rollbacks

c. When transaction is consistently rolled backed, what situation occurs and what it is called?

d. Different between Intended Exclusive and Intended Shared Lock?

e. What do you mean by Undeliverable Messages.

f. How Primary copy 2pl is different from Distributed 2pl.

g. How is log record buffering done in system log?

h. What do you mean by Orphan message and inconsistent messages?

i. Join or Semi Join, which operation is good for query optimization.

j. Give difference between Linear and bushy tree.

Section - B

Note : Attempt any 5 questions from this section.

(5×10=50)

2. Explain the all possible sequences of states through which a transaction may pass. Explain why each state transition may occur.

3. What do you mean by Serializability of schedule? How a schedule with conflict instruction can be converted into to a Serializabil schedule? Explain.

4. What is use of lock? What are the different locking Protocols? Explain. How Multi version technique is used in concurrency control.

5. What is Data Recovery and when Recovery is needed? What are the different operations tracks by Recovery manager?

6. What is Distributed Database? How Distributed Transaction Management takes place and what are Goals of Transaction Management?

7. What do you mean by Distributed Database Failure? What are the different Failures which may occur in distribute database system? Explain.

8. What do you mean by Distributed Query process? How system selects optimize strategy for Query Processing? Explain with example.

9. Describe query optimization in distributed database. How is it different from query optimization in a standalone database?

Section - C

Note : Attempt any 2 questions from this section. **(2×15=30)**

10. Describe the architecture for looking scheduler. What are the two basic techniques used to ensure the serializability by using locks? Explain in detail.

11. What is Atomic Commit protocol? Explain all phases in detail. Also differentiate it from 3PC protocol.

12. Explain Distributed Deadlock Detection. What are the Methods for Handling Deadlocks? Explain Centralized approach for handling Deadlocks.