Roll No. | | | | | | | | | | | | Total No. of Pages : 01

Total No. of Questions : 08

Ph.D in Faculty of Engineering (CSE)

ADVANCED DATABASE SYSTEMS

M.Code : 77356

Time : 3 Hrs. Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT question.
2. Each question carry TWENTY marks.

1. Explain in detail various concurrency control methods. 20

2. a) Explain the functions performed by a query compiler. 12

   b) Explain the query transformation rules for relational algebra with examples. 8

3. a) What UML diagram types exist? Name each diagram type and describe its main purpose. 10

   b) How the cost of a query plan is estimated? Discuss in detail. 10

4. a) Discuss specialization, aggregation and generalization features of E-R modeling with examples. 10

   b) Discuss the different possible states of a transaction with the help of a diagram. 10

5. a) Explain in detail architecture of distributed DBMS. 10

   b) What is E-R modeling? Explain the components of and E-R model. 10

6. a) Compare object-oriented and object-relational databases. 10

   b) Discuss fragmentation transparency, replication transparency and location transparency in distributed databases. 10

7. a) Explain how deadlocks are controlled and managed in distributed databases? 12

   b) How the transactions are handled in distributed database? Explain. 8

8. Write short notes on the following : 20

   a) Temporal databases

   b) Spatial databases

   c) Wireless Networks

   d) Digital libraries

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.