Register Number: ……………………..

B.E DEGREE EXAMINATIONS: APRIL/MAY 2014

(Regulation 2009)

Fifth Semester

COMPUTER SCIENCE & ENGINEERING

CSE115**:** Advanced Database Technologies

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. A centralized database that can be accessed over a computer network is called

    a) Distributed DBMS   b) Distributed processing
    c) Parallel DBMS   d) parallel Processing

2. The reliability and availability is improved in DDBMS through

    a) Maintaining fragmentation   b) Locality of reference
    c) Maintaining replication   d) Maintaining large storage

3. Election protocol used for

    a) Deadlock detection   b) Termination protocol
    c) Locking protocol   d) Recovery protocol

4. How many types of replication supported by ORACLE

    a) 4   b) 3
    c) 5   d) 2

5. The relational model and relational systems in particular have weaknesses such as

    a) poor representations of real world   b) semantic overloading
        entities
    c)   poor support for integrity and   d) all the above
        enterprise constraint

6. An OODBMS must, at a minimum, satisfy _____.

    a) database functionality   b)   object identity and encapsulation
    c)   object with complex state   d) All the above

7. The major components of the ODMG architecture for an OODBMS are_____.

    a) an Object model   b)   an object definition language
    c)   an object query language   d) all the above

8. A universal server is to represent_____

    a) ORDBMS   b) OORDBMS
    c) Global server maintain Internet   d) None of the above

9. An event can be considered in the following ways_____

    a) Immediate consideration   b) Deferred consideration
    c) Detached consideration   d)   all the above

10. Deductive database model is closely related to the

    a) Relational algebra.   b) SQL
    c) Tuple relational calculus   d) domain relational calculus

PART B (10 x 2 = 20 Marks)

11. What are the major components in Distributed DBMS?

12. Define Federated DBMS

13. What is ACID in database management systems?

14. What is meant by data fragmentation and data replication in Distributed databases?

15. What do you mean by Pointer Swizzling?

16. List out the characteristics of OODBMS data model

17. What are the advanced features supported by the OMG?

18. Depict Stonebreaker's view of database world.

19. What is meant by Bi-temporal database?

20. List out the applications of multimedia database

PART C (5 x 14 = 70 Marks)

21. a)   What is Transparency in Distributed Database Management System? Explain the
            various types of transparencies in detail.

(OR)

    b) (i)   State and explain in detail about Date's twelve rules.   (10)
        (ii) Differentiate homogeneous and heterogeneous distributed database.   (4)

22. a)   Discuss deadlock management in distributed databases.

(OR)

    b) (i)   Discuss in detail about Distributed Query Optimization.   (7)

| | | (ii) | Explain about the distribution and replication in Oracle. | (7) |

23. a) (i) State and explain the Weaknesses of RDBMS in detail. (7)

      (ii) Write a short note on OODBMS perspective. (7)

(OR)

   b) (i) Discuss the advantages and disadvantages of OODBMS. (7)

      (ii) Explain about orthogonal persistence. (7)

24. a) (i) Write a note on object management group. (7)

      (ii) Discuss about object database standard. (7)

(OR)

   b) (i) Compare object relational database management system with object-oriented (7)

          database management systems.

      (ii) Write a detailed note on SQL3. (7)

25. a) (i) What is a Trigger? Write a short note on it. (7)

      (ii) Explain in brief about Temporal Database Concepts. (7)

(OR)

   b) Discuss in detail about Mobile Databases with necessary diagrams.

****