B.TECH. COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

June, 2013

BICSE-007 : DISTRIBUTED DATABASE

Time : 3 hours   *Maximum Marks : 70*

Note : *Attempt **any seven** questions. All questions carry **equal** marks.*

1. (a) Does distributed database designed for a local - area network differ from one designed for a wide - area network ?   **5**

    (b) To which transparency feature are the query optimization functions related ? Explain briefly.   **5**

2. Discuss the advanced transaction models suitable for different kinds of DDBMS.   **10**

3. (a) List and discuss some of the factors that influenced the evolution of DDBMS.   **6**

    (b) Describe the three data fragmentation strategies, with the help of suitable examples.   **4**

4. Study and summarize the facilities that the database system you are using provides for dealing with inconsistent states that can be reached with lazy propagation of updates.   **10**

5. (a) List various types of query optimization techniques used in DDBMS. 5

   (b) Differentiate between file server and client - server architecture. 5

6. (a) What are the advantages and disadvantages of DDBMS ? 5

   (b) Describe the evolution from centralized DBMS to DDBMS. 5

7. (a) Explain why it may be impractical to require serializability for long - duration transactions. 4

   (b) What is the purpose of compensating transactions ? Give two examples of their use. 6

8. (a) What are the three broad levels at which a database system can be tuned to improve performance ? 5

   (b) Give two examples of how tuning can be done, for each of the levels. 5

9. (a) Describe the benefits and drawbacks of pipelined parallelism 4

   (b) Explain the notions of transparency and autonomy. 6