BICSE-007

B.TECH. COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

December, 2012

BICSE-007 : DISTRIBUTED DATABASE

Time : 3 hours   *Maximum Marks : 70*

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

1. (a) Discuss the relative advantages of centralized and distributed databases.   6

    (b) Explain the notions of transparency and autonomy.   4

2. (a) What is data replication, and what are the three replication strategies ?   5

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

3. Describe how LDAP can be used to provide multiple hierarchical views of data, without replicating the base level data.   10

4. (a) Explain the difference between file server and client server architecture.   5

    (b) What are the different types of query optimization algorithms ?   5

5. (a) Describe the various components of **4**
DDBMS.

(b) Give an example where the read one, and **6**
write all available approach leads to an
erroneous state.

6. (a) Explain the various strategies used in buffer **5**
management.

(b) Is the expression $r_i \alpha r_j$ necessarily equal to **5**
$r_j \alpha r_i$?

7. (a) What is a scheduler, what does it do and **6**
why is its activity important for concurreny
control ?

(b) What is application recovery problem ? **4**

8. Discuss the advanced transaction models suitable **10**
for different kind of distributed DBMS.

9. (a) Explain how 2 PC ensures transaction **5**
atomicity despite the failure ?

(b) Explain the need for the two phase commit **5**
protocol.

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