Code No: R05420504 **R05** **Set No. 2**

IV B.Tech II Semester Regular/Supplementary Examinations,May 2010
DISTRIBUTED DATABASES
Computer Science And Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Discuss the properties of a transaction.
   (b) Write about checkpoint operations in recovery procedures. [8+8]
2. (a) Discuss the problems with query optimization in DDB.
   (b) Explain the following with examples
      i. Cartesian
      ii. Selection
      iii. Join and Semi-join
      iv. Group-By. [8+8]
3. Write a short note on the following:
   (a) Client buffer management
   (b) Server buffer management
   (c) Characteristics of object models. [6+4+6]
4. Explain the following Authorization and Protection problems:
   (a) Enforcing Authorization Rules
   (b) Classes of Users. [8+8]
5. Explain the following in detail:
   (a) Distributed Component Object Model.
   (b) CORBA and Database Interoperability. [8+8]
6. (a) Discuss parametric queries in detail.
   (b) Draw an operator tree for the following query. [8+8]
7. (a) Explain the conservative timestamp method.
   (b) Consider the data item x. Let RTM(x)=25 and WTM(x)=20. Let the pair(Ri(x), TS) (Wi(x), TS) denote the read(write) request of transaction Ti on the item x with timestamp TS. Indicate the behavior of the basic timestamp method with the following sequence of requests.
   (R1(x), 19), (R2(x), 22), (w3(x), 21)
   (W4(x), 23), (R5(x), 28), (W6(x), 27). [6+10]

8. (a) Consider the global relations:
PATIENT(NUMBER, NAME, SSN, AMOUNT-DUE,DEPT,DOCTOR,MED-TREATMENT)
DEPARTMENT(DEPT,LOCATION,DIRECTOR)
STAFF(STAFFNUM,DIRECTOR,TASK)
Define their fragmentation as follows:

(b) Discuss the levels of distribution transparency in brief. [8+8]

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