

Exam. Code : 206702

Subject Code : 3525

M.Sc. (Computer Science) Semester—II

DISTRIBUTED DATABASE SYSTEMS

Paper—MCS-205

Time Allowed—3 Hours] [Maximum Marks—100

Note :— There are *eight* questions. Attempt any *five*. Each question carries equal marks. Student can use only non-programmable and non-storage type calculator.

1. (a) What is global relation ?  
(b) Which are different types of Schemes ?
2. (a) How a global query is converted into fragmented query ?  
(b) What is role of unary and binary tree in a query ?
3. (a) Explain hybrid fragmentation with the help of an example.  
(b) Which are various levels of transparency in a distributed database system ?
4. (a) Give examples of aggregate functions and parametric queries.  
(b) Write a note on log based recovery mechanism.

5. Discuss the process of query optimization.
6. Explain following with reference to distributed databases :
  - (a) 3-Phase locking and commitment protocol.
  - (b) What is concurrency control ?
7. Explain following with reference to distributed databases :
  - (a) Distributed database administration
  - (b) Authorization and protection in distributed databases.
8. (a) What is role of local and global wait for graph in distributed deadlocks ?  
(b) What are heterogenous database systems ?