

(3 Hours)

Total Marks:80

N.B. : (1) Question No. 1 is compulsory  
(2) Attempt any three questions out of remaining five.

1. (a) Explain Query Processing in distributed databases. 20  
 (b) What is Need of Document Oriented database  
 (c) Explain cost based query optimization.  
 (d) What is SQL Injection ? Given one example
2. (a) What is External sorting in Query processing 10  
 (b) Consider the following schema 10  
 Department ( Dno, Dname, Budget, Location )  
 Employee( Eid, Ename, Title, Dno )  
 Salary( Title, Salary )  
 Show one example of Horizontal and vertical fragmentation with fragmentation rules in detail
3. (a) Explain Three Phase Commit Protocol in detail 10  
 (b) What is XML? also explain xml schema document with example. 10
4. (a) Draw and explain architecture for distributed database system 10  
 (b) Explain different types of Spatial Data models 10
5. (a) Write a short note on Temporal Data Model 10  
 (b) Explain Discretionary access control in detail. 10
6. Write a short note on (Any 2 ) 20  
 (a) Single-Level Ordered Indexes  
 (b) Replication and Allocation Techniques for Distributed Database Design.  
 (c) Mandatory Access Control Access Control for Multilevel Security

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