

Tribhuwan University
Institute of Science and Technology
2075

Bachelor Level / eighth-semester / Science

Computer Science and Information Technology(CSC457)

(Distributed and Object Oriented Database)

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Full marks: 60

Pass marks: 24

Time: 3 hours

Group A

Attempt any two questions.

1. What is data fragmentation? Explain horizontal, vertical, and mixed fragmentation with suitable example.
2. Discuss query decomposition in distributed databases. How is it different from query localization?
3. Explain different characteristics of object oriented data model. What is extended relational model approach for object oriented database management system?

Group B

Attempt any Eight questions.

4. Define client/server architecture. What is distributed multidatabase system architecture?
5. Discuss different design issues that arise in building a distributed DBMS.
6. Discuss semijoin operation. Compare it with join operation.
7. Define transaction. Discuss architectural aspects of distributed transaction.
8. What are different types of failures in distributed database management systems? Explain.
9. Why do we need concurrency control? Discuss distributed two phase locking technique.
10. What is object definition language? How is it different from object query language?
11. What are the performance issues related with object oriented database management systems?
12. What are the performance issues related with object oriented database management systems?
13. Write short notes on:
 - a) Object identity
 - b) CORBA