

Roll No. ....

Total Pages : 03

BT-8/M-19

38194

ADVANCED DATABASE SYSTEM

Paper-IT-404N

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *Five* questions in all, picking at least *one* question from each Unit.

**Unit I**

1. (a) Explain issues in parallel query evaluation.  
(b) Define the term distributed data independence. What does this mean with respect to querying and updating data in presence of data fragmentation and replication ? 7,8
  
2. (a) What is parallel query optimization ? Discuss.  
(b) How can recovery happen in case of distributed database ? How to handle in-doubt transactions ? 7,8

## Unit II

3. (a) Write down general form of classification and regression rules. Also define support and confidence form them.
- (b) What are association rules ? How to find them ?  
What are the uses of association rules ? 6,9
4. (a) Discuss with the help an example classification trees and regression trees.
- (b) What is Clustering ? Explain concept of agglomerative clustering. 6,9

## Unit III

5. (a) What are object databases ? What is an ORDBMS ?  
How is inheritance implemented in object databases ?
- (b) What are structured types ? Explain some of the operation that should be supported on structured and reference types. 7,8
6. (a) Explain query processing issues in terms of functionality and efficiency ORDBMSs.
- (b) Compare RDBMS, OODBMS and ORDBMS in terms of structure type, object identity and query manipulation. 7,8

## Unit IV

7. (a) What is failure-atomicity requirement of a workflow in TP-monitor ? What are some other requirements of advanced transaction processing ?
- (b) What are temporal and sequenced databases ? Why these should be handled differently ? 8,7
8. (a) Analyze the problems that need to be handled when storing data in main memory. Consider these from the transaction processing scenario.
- (b) Discuss integrated access to multiple data sources including retrieval of data. 8,7