Exam.Code:0919 Sub. Code: 6803

## 1078

## B.E. (Computer Science and Engineering) Seventh Semester CS-702: Advance Database Systems

Time allowed: 3 Hours

Max. Marks: 50

**NOTE:** Attempt <u>five</u> questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

- I. Write short note on following:
  - a) Heuristic Query Optimization
  - b) Checkpoints
  - c) Shadow Paging
  - d) Goals of data mining
  - e) SQL3

(5x2)

## UNIT-I

- II. a) Why is data replication useful in DDBMSs? What typical units of data are replicated?
  - b) How do regular inheritance, multiple inheritances and selective inheritance differ? (5,5)
- III. a) Explain how heuristic query optimization is performed with an example.
  - b) Why are normal forms alone insufficient as a condition for a good schema design?
  - c) What is a data cube? How is it used in data warehousing?

(5,2,3)

- IV. a) What are the five types of knowledge produced from data mining? What are the difficulties of mining association rules from large databases?
  - b) When are voting and elections used in distributed databases?

(7,3)

## UNIT-II

- V. a) How is the concept of serializability useful for concurrency control?
  - b) Discuss the differences between database systems and information retrieval systems.
  - c) List and explain in brief the main categories of data models.

(4,3,3)

P.T.O.

- VI. a) Write a short note on commercial database products and their uses.
  - b) List the advantages and disadvantages of DDBMS.
  - c) How does data mining differ from and extend the functionality of a typical Database Management System? (4,3,3)
- VII. a) Describe the four levels of isolations in SQL.
  - b) What is a participation role? When is it necessary to use role names in the description of relational types? (5,5)

x-x-x