

SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY  
DEEMED UNIVERSITY

Course: B.E./B.Tech.

Semester: V

Title of the paper: Database Management System Max. Marks: 80

Sub. Code: 12506 (2001)

Time: 3 Hours

PART – A

(10 x 2 = 20)

Answer ALL the Questions

1. Explain a query compiler.
2. What is the use of data striping?
3. Explain relational algebra.
4. Differentiate BCNF and 3NF.
5. What is meant by a query Optimization?
6. Explain the two-phase locking protocol.
7. Explain a network database.
8. Differentiate hierarchical model and network model.
9. What is meant by an object identity?
10. Write any four characteristics of data ware houses.

PART – B

(5 x 12 = 60)

Answer ALL the Questions

11. Explain the database system environment.  
(or)
12. Explain the following with neat diagram:  
(a) Internal hashing  
(b) External hashing for disk files

13. What are the fundamental operations of algebra? Give examples.  
(or)
14. Explain with example the normalization using functional dependencies.
15. Explain the transformation of relational expressions in query processing.  
(or)
16. Explain lock-based protocols in concurrency control with examples.
17. Explain the following in the network model:  
(a) Data structure diagram  
(b) The DBTG CODASYL model  
(or)
18. Explain the parallel databases with examples.
19. Explain the object oriented data model with examples.  
(or)
20. Explain the data modeling for data warehouses.