Code No. 4218

FACULTY OF ENGINEERING
B.E. 3/4 (CSE) I Sem. Suppl. Examination
June - 2008
Subject : Data Base Management System

Time : 3 hours]   [Max. Marks : 75

Note :   (a) Answer *all* questions from Part-A and

(b) Answer *five* questions from Part-B.

PART - A (25 marks)

1.	What is meant by 'Data Abstraction' ? Explain.	3
2.	Briefly explain about 'Weak Entity'.	2
3.	Describe about 'Domain Constraints'.	3
4.	Explain when a relation is said to be in First Normal Form.	2
5.	List and explain about various steps in 'Query Processing'.	3
6.	Briefly explain about 'Pinned Record'.	2
7.	Explain how to transform a Relational Expression.	3
8.	Draw and explain 'State Diagram of a Transaction'.	2
9.	What is meant by 'Database Buffering' ? Explain.	3
10.	Explain about 'Stable Storage'.	2

PART-B (5×10=50 marks)

11.	(a) Describe about 'Storage Manager'.	5
	(b) Explain how to reduce E-R diagrams to tables.	5
12.	(a) Explain about the following	3+3
	(i) Security	
	(ii) Third Normal Form	
	(b) Differentiate between 'group by' and 'order by' clauses in SQL.	4

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13. (a) Construct the B+Tree and B-Tree for the following set of search key values where a node in the tree can accommodate three pointers. 3+3

    15   25   35   45   55   65   75   85

    (b) Describe about 'Dynamic Hashing'. 4

14. (a) Describe about 'ACID Properties'. 4

    (b) Explain the following 3+3

    (i) Conflict Equivalent

    (ii) Catalog Information

15. (a) Describe about 'Immediate Database Modification.' 4

    (b) Explain the following. 3+3

    (i) Transaction Rollback

    (ii) Parallel Database Architecture

16. (a) What is the functionality of following operations in Relational Algebra ? 6

    Rename   Division   Natural-Join

    (b) Explain how to design the database. 4

17. Write short notes on any two of the following. 5+5

    (a) Encryption

    (b) Assertions

    (c) Distributed Systems