

E 260

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2003.

Third Semester

Computer Science and Engineering

CS 234 — DATA BASE MANAGEMENT SYSTEMS

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What for logical level is used in data abstraction?
2. Explain briefly about E-R data model.
3. How 'Natural-Join' operation is performed?
4. What is embedded SQL? Explain briefly.
5. What is referential integrity?
6. Draw the structure of a typical node of a B⁺ tree and explain briefly.
7. Explain briefly nested-loop join.
8. What are the various modes in which a data item may be locked? Explain.
9. List out various approaches of persistence of objects.
10. What is Data Mining?

PART B — (5 × 16 = 80 marks)

11. (i) How to provide closure of attribute sets? Explain necessary algorithm with example. (8)
- (ii) What are the advantages of 3 NF over BCNF form for relational database schemas? (8)

12. (a) (i) What are the components used in storage manager of a database system? What are their tasks? (8)
- (ii) Explain various parts of UML in detail. (8)

Or

- (b) (i) In what way data-manipulation languages are different from conventional procedural languages? Explain. (8)
- (ii) How to represent strong entity sets using table? Explain with an example. (8)
13. (a) (i) With example, explain the Cartesian product operation in detail. (8)
- (ii) What are Aggregate functions in SQL? Explain with example. (8)

Or

- (b) (i) How to perform 'Outer Join' operation in a relational algebra operation? Explain with example. (8)
- (ii) Explain with example, the basic structure of an SQL. (8)
14. (a) (i) How to implement complex selections? Explain with examples. (8)
- (ii) Explain multiple granularity locking protocol in detail. (8)

Or

- (b) (i) What is ACID with reference to Transaction? Explain in detail with example. (8)
- (ii) Discuss in detail on shadow paging. (8)
15. (a) (i) What are the basic issues while implementing distributed databases? Explain. (8)
- (ii) Explain how decision tree classifier is used for data mining? (8)

Or

- (b) (i) Discuss in detail on object relational databases and their use. (8)
- (ii) With a diagram, explain star schema for a data warehouse. (8)