Tribhuvan University
Institute of Science and Technology

2072

Bachelor Level/ Fourth Year/ Seven Semester/ Science   Full Marks: 60
Computer Science and Information Technology (CSc. 401)   Pass Marks: 24
(Advanced Database Management System)   Time: 3 hours

Candidates are required to give their answers in their own words as far as practicable.
The figures in the margin indicate full marks.

Attempt all questions.

1. Explain the following terms:
    a. Database performance tuning
    b. UML
    c. Subclass vs Superclass
    d. X Query
    e. Calendars
    f. Active Database
2. What are query optimization techniques? Explain.
3. Differentiate between specialization and generalization with example.
4. How do single inheritance, multiple inheritance and selective inheritance differ?
5. What are the differences between structured and unstructured complex objects? Explain.
6. What are the object relational features that have been included in SQL-99?
7. Discuss how time is represented in temporal database and compare different time dimensions.
8. What are the difference and similarities between objects and literals in the ODMG Object Model?
9. Describe multimedia database and what are the different types of multimedia data that are available in current systems?
10. Explain XML schema and XML DTD.

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