

Tribhuvan University  
Institute of Science and Technology

2077



Bachelor Level / Fourth Year /Seven Semester/Science  
**Computer Science and Information Technology-(CSc.401)**  
**(Advanced Database Management System)**

Full Marks: 60  
Pass Marks: 24  
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.**

**(10 x 6 = 60)**

1. Discuss query optimization with suitable example. What is the importance of query optimization in database? (4+2)
2. How can you convert an EER design to a relational design? Discuss with suitable example. (6)
3. Discuss various type constructors used in object-oriented database. How are they used to create complex objects? (4+2)
4. What is complex object? What is the difference between structured and unstructured complex objects? (1+5)
5. Define object relational database. Discuss object relational features of SQL. (1+5)
6. What is active database? Discuss generalized model for active databases. (2+4)
7. Discuss how time is represented in temporal databases and compare the different time dimensions. (3+3)
8. What is data mining? Discuss different types of knowledge discovered during data mining. (1+5)
9. What is data warehouse? How does it differ from a database? (2+4)
10. What is mobile database? Discuss mobile computing architecture in detail. (1+5)