

Bachelor Level / seventh-semester / Science

**Computer Science and Information Technology(O-CSC401)**

(Advanced Database Management System(old syllabus))

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.

Full marks: 60

Pass marks: 24

---

**Attempt all questions. (10x6=60)**

- 1. What is query processing? How is it different from query optimization? Discuss cost estimation for relational algebra expressions.**
- 2. What is data fragmentation? Discuss horizontal and vertical fragmentation in detail.**
- 3. Why do we need extended ER modeling? Discuss class/subclass relationship with example.**
- 4. How do object relational database support multi-valued and composite attributes? Discuss with example.**
- 5. What are the uses of active database? Discuss active database with example.**
- 6. Discuss mobile computing architecture. Discuss mobile data management in detail.**
- 7. Why do we need temporal database? Discuss valid time, transaction time and bi-temporal relations.**
- 8. Discuss benefits and applications of data mining. How is classification different from clustering?**
- 9. What is web service? Discuss SOAP in detail.**
- 10. Write short notes on: Deductive database ODMG.**