

Tribhuvan University
Institute of Science and Technology
2074

Bachelor Level / eighth-semester / Science Full marks: 60 **Computer Science and Information Technology(CSC461)** Pass marks: 24
(Advanced Database) 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 the questions.

1. Explain the following terms:

- a) Data replication
- b) UMI
- c) SOL: 2003
- d) Xpath
- e) SOAP
- f) Clustering

2. What is mobile computing? Explain its architecture.

3. Explain the process of EER to relational mapping with examples.

4. Discuss the concept of encapsulation, and tell how it is used to create abstract data types.

5. What are the differences between structured and unstructured complex objects ? Explain

6. What is a temporal database? Explain the terms date, time, timestamp, interval and period.

7. What is a data warehouse? Explain the architecture for the functionality of a data warehouse.

8. What is a multimedia database? What is the nature of multimedia databases and applications?

9. What is data mining? Discuss association rule mining with examples.

10. What is GIS? What are GIS data operations?