

Tribhuvan University  
**Institute of Science and Technology**

2074

Bachelor Level/ First Year/ First Semester/ Science

Full Marks: 60

Computer Science and Information Technology (CSc. 101)

Pass Marks: 24

(Introduction to Information Technology)

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 any two questions:

1. What is communication protocol? Discuss the OSI model with its layer.
2. What is the objective of using OS? How os system performs process, memory, and file management system?
3. What is data model? How E-R model can be used to create the conceptual data model? Explain with example.

Attempt any eight examples:

4. What is computer system? Discuss components of its.
5. Why bus is used in computer? How control bus differs from data bus?
6. How many bits is equivalent to 1KB? Discuss the working mechanism of magnetic tape.
7. Mention of the use of plotter. How quality of printer is determined?
8. What do you mean by IOT? Explain.
9. Define each of the term confidentiality, integrity, and authentication.
10. What is multimedia? Discuss its application.
11. What is Big Data? How centralized database is different that the distributed database?

12. Convert (10.4) decimal to binary. Add (10111) with (01111).