

**Tribhuvan University**  
**Institute of Science and Technology**  
**2074**

Bachelor Level / First Semester / Science

**Computer Science and Information Technology(CSC109)**

((TU CSIT) Introduction to Information Technology)

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

Time: 3

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**Attempt any two questions:**

1. What is communication protocol? Discuss the OSI model with its layers.
2. What is the objective of using operating system? How operating system performs process, memory and file management activities.
3. What is data model? How ER-Model can be used to create conceptual data model? Explain with example.

**Attempt any eight questions:**

4. What is computer system? Discuss components of computer system.
5. Why bus is used in computer? How control bus differs from data bus?
6. How many numbers of bites are equivalent 1 kilobyte? Discuss the working mechanism of magnetic tape.
7. Mention the use of plotter. How quality of printer is determined?
8. What do you mean by Internet of Things (IoT)? As an IT expert, mention the possible applications of IoT that you have observed in Nepal.
9. Define each of the terms confidentiality, integrity, and authentication.
10. What is multimedia? Discuss the applications of multimedia.
11. What is BigData? How centralized database is different than the distributed database?
12. Convert  $(10.4)_{10}$  to binary. Add  $(10111)_2$  with  $(01111)_2$ .