

CSc.109-2077

Tribhuvan University  
Institute of Science and Technology

2077



Bachelor Level / First Year/ First Semester/ Science  
**Computer Science and Information Technology (CSc. 109)**  
(Introduction to Information Technology)  
**(NEW COURSE)**

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.

**Section A**

**Attempt any two questions: (2×10=20)**

1. Define computer software. Differentiate system software with application software. Explain different types system software in detail. (1 + 2 + 7)
2. What are the benefits of using computer network? Explain different types of computer network in detail. What is network topology? (3 + 6 + 1)
3. What is database? What are the benefits of storing data in databases? Explain database system architectures in detail. (1 + 3 + 6)

**Section B**

**Attempt any eight questions. (8 × 5 = 40)**

4. What are different characteristics of a computer? Differentiate digital computer with analog computer. (3 + 2)
5. What is primary memory? Compare primary memory with secondary memory. (2 + 3)
6. Define memory hierarchy. Explain different types of ROM in detail. (1 + 4)
7. Explain any two input devices in detail. (5)
8. Convert  $(110101.101)_2$  to decimal. (5)
9. Define IP address. Why do we need this address? Compare IPv4 address with IPv6 address. (1+ 2+2)
10. What are different elements of multimedia? Explain. (5)
11. What is cryptography? How does cryptography provide security to our data? (2 + 3)
12. Write short notes on: ( $2 \times 2.5 = 5$ )
  - a. Central processing unit
  - b. IoT