

Tribhuvan University
Institute of Science and Technology
2077

Bachelor Level / first-semester / Science Full marks: 60 **Computer Science and Information Technology(CSC109)** 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.

Section A

Attempt any two questions:(2x10=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 a computer network? Explain different types of system software in detail.What is network topology?(3+6+1)**
- 3. What is database? What are benefits of using storing database system architectures in detail.(1 + 3 + 6)**

Section B

Attempt any eight questions.(8 x 5 = 40)

- 4. What are different characteristics of a computer? Differentiate digital computer with analog computer.**
- 5. What is primary memory? Compare primary memory with secondary memory.**
- 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?**
- 12. Write short notes on:(2 x 2.5 = 5)**
 - a. Central processing unit**
 - b.IoT**