

**TRIBHUVAN UNIVERSITY**  
**Institute of Science and Information Technology**  
**Model Question Paper**

Bachelor Level/ First Year/ First Semester/ Science  
**Computer Science and Information Technology (CSc. 101)**  
(Introduction to Information Technology)

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.

**Long Questions:**

**Attempt any two questions:**

(2x10=20)

1. What are the different input devices used in computer systems? Explain.
2. Differentiate between Database and Database Management System. What are the characteristics of data in database? Explain the services provided by Database Management System.
3. What is Data Warehouse and Data Mining? Write down advantages of data mining? Explain briefly the technologies used in data mining.

**Short Questions:**

**Attempt any eight questions:**

(8x5=40)

4. Classify the digital computer on the basis of size.
5. Convert  $(10101)_2$  to octal and hexadecimal. Subtract 1111 from 101101.
6. Write down the function provided by Operating System.
7. What are the features of today's software? Explain briefly.
8. Why data Normalization is necessary in Database Management System? Explain the relationship between related tables in DBMS with example.
9. Why modulation is necessary in communication system? Explain briefly different types of modulation.
10. What are different topologies used in computer network? Explain briefly.
11. Write down the common uses of Internet in today's world.
12. What is GIS? Write down the benefits of GIS.
13. Write down the applications of Information Technology.

**Note 1:** Long questions to be selected from the following chapters.

Chapter 1: Introduction to computer system.

Chapter 3: Database Management System.

Chapter 4: Telecommunications.

Chapter 5: Internet and New Technologies in Information Technologies.

**Note 2:** Eight short questions to be selected from all chapters based on allocated lecture hours.