

**Tribhuvan University**  
**Institute of Science and Technology**  
**2073**

Bachelor Level/ First Year/ First Semester/ Science  
**Computer Science and Information Technology (CSc. 102)**  
(Fundamental of computer programming)

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.

**Attempt all questions: (6 × 10 = 60)**

1. Draw a flow chart and write an algorithm to find out whether a given number is zero, +ve or -ve.
2. What are the different types of operators available in C? Explain.
3. Describe the four basic data types with example.
4. Differentiate between while and do while loop with example.
5. Write a program to check whether the diagonal elements of a (4\*4) matrix are all Zero.
6. What is the function of a pointer variable? Explain the declaring and initializing pointers with example.
7. Write a program using pointers to read in an array of integers and print its elements in reverse order.
8. Differentiate between call by value and call by reference with example.
9. What is structure? How is it different from array and Union? Discuss
10. Define the graphics function. Write a program to draw a circle using graphics function.