

**Tribhuvan University**  
**Institute of Science and Technology**  
**2070**

Bachelor Level / first-semester / Science Full marks: 60 **Computer Science and Information Technology(CSC110)** Pass marks: 24 (C Programming) 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**

**1. What is logical error? Write flowchart and program for checking whether the number entered by the user is exactly divisible by 5 or by 11. [1+5]**

**OR**

**What is algorithm? Write an algorithm to check given number is prime or composite. [1+5]**

**2. What is operator? List any six operators used in C-programming language. Write a program to find least number between any two numbers using ternary operator. [1+2+3]**

**3. Define printf() function, header file and main function. Find the value of following expression. Use the value initially assigned to the variables for each expressions. [4.5+1.5]**

`int a = 8, b = 5;`

`float x = 0.005, y = -0.01;`

**1) `2 * ((a / 5) + 4 * (b - 3)) % (a + b - 2);`**

**2) `(x > y) && (a > 0) || (b < 5);`**

**3) `(a > b)?a:b;`**

**4. Difference between if and switch statement. Write a program to read the marks of four subjects then find total, percentage and division according to given condition. [1+5]**

**Percentage Division**

**`p ≥ 80` Distinction**

**`80 > p ≥ 70` First division**

**`70 > p ≥ 50` Second division**

**`50 > p ≥ 40` Third division**

**Otherwise Fail.**

**Assume each subjects carrying 100 full marks and students must secure greater or equal to 40 in each subjects for**

**division. 5. Differentiate between break and continue statement. Write a program to display following output. [2+4] 1**

**1 1**

**1 1 1**

**1 1 1 1**

**1 1 1 1 1**

**6. Write a program to input any 10 numbers then find out greatest and smallest number. [6]**

**7. Write a program to add two 3×3 matrix using function. [6]**

8. What is recursion? Write a program to find the factorial of given number using recursion.

[2+4] OR

What is pointer? Write a program to sort 'n' numbers in ascending order using dynamic memory. [2+4]

9. List any five names of graphics function. Write a program to read line of text then count no. of vowels, No. of digits and no. of spaces. [2+4]

10. Write a program to create a file "RECORD.TXT" then store roll no, name and percentage of 10 students. [6]