

Tribhuvan University  
**Institute of Science and Technology**  
 2075  
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Bachelor Level / First Year/ First Semester/ Science  
**Computer Science and Information Technology (CSc. 110)**  
 (C Programming)  
(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.

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

1. What is looping statement? Discuss different looping statements with suitable example of each. (2+8)
2. Define array? What are the benefits of using array? Write a program to add two matrices using array. (1+2+7)
3. Why do we need data files? What are the different file opening modes? Write a program that reads data from a file "input.txt" and writes to "output.txt" file. (2+3+5)

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

4. Discuss different logical operators in detail. (5)
5. What is break statement? Discuss with example. How the break statement is different from continue statement? (1.5+3.5)
6. Write a program to check whether a number entered is even or odd. (5)
7. Write a program to calculate sum of first 10 odd numbers. (5)
8. What is preprocessor directive? Discuss # define directive with example. (1.5+3.5)
9. Discuss any five string library functions. (5)
10. What is dynamic memory allocation? Discuss the use of malloc ( ) in dynamic memory allocation with example. (1+4)
11. What is structure? Create a structure rectangle with data members length and breadth. (2+3)
12. Write short notes on: (2.5+2.5)
  - (a) Benefits of data files
  - (b) Graphics functions.