



EndTerm Semester Examination December 2025

Roll no.....

Name of the Course: BCA

Semester: I

Name of the Paper: Foundations of Computer Programming

Paper Code: TBC 102/TBI102

Time: 3 hour

Maximum Marks: 100

Note:

- (i) Answer all the questions by choosing any two of the sub-questions
- (ii) Each question carries 20 marks.

Q1. (20 Marks)

- a. Explain the structure and lifecycle of c program.CO1
- b. Explain type conversion in C. Differentiate between implicit and explicit conversions with examples.CO2
- c. Explain how 1D array is declared, initialized, and accessed in C. Also write a program to implement insertion sort.CO2

Q2. (20 Marks)

- a. Explain different types of operators with proper example.CO2
- b. Explain the types of conditional statements with proper syntax and example.CO3
- c. Explain the following:
 - i. segmentation fault
 - ii. datatypes and their size
 - iii. Dynamic linking

Q3. (20 Marks)

- a. Explain different types of loops in C . Differentiate between entry-controlled and exit-controlled loops with examples.CO3
- b.
 - i. Write a C program to check whether a given year is a leap year .
 - ii. Write a C program to display the day of the week using a switch statement.CO3,CO4
- c. Write a program using macros to find the square and cube of a number.CO4

Q4. (20 Marks)

- a.
 - i. Write a C program to print the multiplication table of any number using a while loop.
 - ii. Write a C program to reverse a number using a do-while loop. CO4,CO5
- b. What are break and continue statements? Explain their use with examples.CO4
- c. Explain different types of storage classes in C. Also write a C program to demonstrate the use of different storage classes.CO5

Q5. (20 Marks)

- a. What is a function in C? Explain the different types of functions. Also, write the syntax and example of a user-defined function, showing how it is declared, defined, and called in a C program.CO5,CO6
- b. Write a C program to demonstrate call by value and call by address using functions.CO5
- c. Write a C program to demonstrate passing an array to a function and finding the sum of array elements inside the function.CO5,CO6