

## BSc (NEP) Semester-2 Examination

DSC-C-121 γ

Computer Science

Time : 2-00 Hours]

April-2024

[Max. Marks : 50]

Q1(A) Write a C program to calculate the factorial of a given number using a function. Provide the code for both the function and the main program. (10)

OR

Q1(B) Write a C program to declare variables of each of int, float, and char data types and print their sizes using the sizeof operator. (10)

Q2(A) What is the difference between if, else if, and else statements in C? (10)

OR

Q2(B) Write a C program that takes an integer input from the user and prints whether it is even or odd using the if-else statement. (10)

Q3(A) Write a C program to print the first 10 natural numbers using a for loop. (10)

OR

Q3(B) Define an array of integers in C with 5 elements and write a program to find the sum of all elements using a loop. Provide the code. (10)

Q4(A) Explain the concept of arrays in C. Write a C program to find the largest element in an array of integers. (10)

OR

Q4(B) What is a function prototype in C? Why is it necessary? Write a C program to find the factorial of a number using a recursive function. (10)

**Q5 . True-False Attempt any ten out of twelve.(1 Marks each) (10)**

- 1) printf is a function used to print output to the console in C.
- 2) In C, the == operator is used for assignment.
- 3) C is an object-oriented programming language.
- 4) An array in C can store elements of different data types.
- 5) The scanf function is used to read input from the user in C.
- 6) A function in C cannot return more than one value.
- 7) In C, the && operator is used for logical OR.
- 8) The sizeof operator in C returns the size of a variable in bytes.
- 9) C does not support dynamic memory allocation.
- 10) C does not support floating-point numbers.
- 11) The ternary operator in C is denoted by ?: .
- 12) The void keyword in C is used to declare variables with no value.

ALL THE BEST