

# School of Basic and Applied Sciences

Biological Science

ETE - Jun 2023

Time : 3 Hours

Marks : 100

## Sem IV - E1UA421B - Programming Languages

*Your answer should be specific to the question asked*

*Draw neat labeled diagrams wherever necessary*

1. Describe function. List the different types of functions. K2 CO2 (5)
2. What is a flowchart? To calculate simple interest, create a flowchart and a C programme. K1 CO1 (5)
3. Define a macro with example and write a macro to determine whether the given number is odd or even. K1 CO2 (5)
4. Explain the different types of loops in C with syntax. K3 CO3 (10)
5. Explain the following string handling functions K2 CO2 (10)  
a) strcmp( ) c) getchar() e) strstr()  
b) strlen( ) d) strrev() f) strcpy()
6. Discuss the role of access specifiers in inheritance and show their visibility when they are inherited as public, private and protected. K4 CO3 (10)
- 7) Write a C program that takes three coefficients (a,b,and c) of a quadratic equation ;  $(ax^2+bx+c)$  as input and compute all possible roots and print them with appropriate messages. K3 CO2 (10)

**OR**

- Explain different categories of pre-processor directives used in C. K3 CO3 (10)
8. Illustrate the declaration and initialization of two dimensional array. Also write a C Program to find a transpose of matrix. K4 CO4 (15)
- 9) Distinguish and explain the do and do-while loop. Write separate program for each as an example. K4 CO5 (15)

**OR**

- Outline with general syntax, explain formatted input-output statements. Give example for each. K4 CO5 (15)
10. With proper examples explain different arithmetic operations on pointers. Write a C program to show that pointer of any data type occupies same space. K3 CO4 (15)