

SECOND SEMESTER UG DEGREE EXAMINATION, APRIL 2023**(Regular/Improvement/Supplementary)****BCA****GBCA2B02T: PROBLEM SOLVING USING C****Time: 2 Hours****Maximum Marks: 60****SECTION A: Answer the following questions. Each carries *two* marks.
(Ceiling 20 Marks)**

1. What is the difference between source program and object program?
2. Describe two different ways that floating-point constant can be written.
3. Explain putchar() function with example.
4. Write a short note on sizeof operator.
5. Why decision making statements are called control statement?
6. What is the purpose of do-while statement? Summarize the syntactic rules associated with the do-while statement.
7. Describe the structure of a function in C.
8. Define the term scope & life time of variables in functions.
9. Differentiate between an array and structure.
10. Explain the purpose of strcat function.
11. How to accessing a variable through its pointer? Explain with example.
12. Write a short note on realloc() function.

**SECTION B: Answer the following questions. Each carries *five* marks.
(Ceiling 30 Marks)**

13. Describe the basic structure of C.
14. What is an identifier? Explain the rules for naming identifiers.
15. Write a C program to check whether a character entered by the user is a vowel or not by using the switch case statement.
16. Compare break and goto in terms of their functions.
17. Write a program which will read a text and count all occurrences of a particular word.
18. What are bit fields? How are bit fields defined and used? What are its advantages?
19. What are command line arguments? Explain its purpose.

SECTION C: Answer any *one* question. Each carries *ten* marks.

20. What is precedence of operators? Explain C precedence and associativity of operators.
21. What is meant by dynamic memory allocation? Describe the syntax and usage of memory allocation functions in C.

(1 x 10 = 10 Marks)