D 103725   (Pages : 2)   Name.....................................

Reg. No...............................

SECOND SEMESTER (CBCSS—UG) DEGREE EXAMINATION APRIL 2024

B.C.A.

BCA 2B 02—PROBLEM SOLVING USING—C

(2019—2023 Admissions)

Time : Two Hours   Maximum : 60 Marks

Section A (Short Answer Type)

All questions can be answered.
Each question carries 2 *marks.*
Ceiling 20 *marks.*

1. Describe the general structure of a C program.

2. What are C tokens and name the different types of tokens in C ?

3. Define what keywords and identifiers are in C programming.

4. Explain with example various arithmetic operators in C.

5. What is the difference between the increment and decrement operators in C ?

6. Explain the concept of operator associativity in C with an example.

7. Explain the use of the IF statement in decision making in C with an example.

8. How does the switch statement work in C ?

9. Explain the syntax and use of the while loop in C with an example.

10. What is the purpose of function prototypes in C ?

11. Describe the difference between structures and unions in C.

12. What is a pointer in C, and how do you declare and initialize pointers in C ?

Turn over

Section B (Paragraph/Problem Type)

All questions can be answered.
Each question carries 5 marks.
Ceiling 30 marks.

13. Describe the different data types available in C and explain how variables are declared and assigned values.

14. Explain the precedence and associativity of arithmetic operators in C.

15. What is a user defined function ? What advantages it offers in programming ?

16. Distinguish break and continue statements with the help of examples.

17. Write a C program to count number of positive, negative and zeroes in a set of numbers. Also find their percentages.

18. Discuss the functionality of the conditional operator in C with an example.

19. Discuss common string manipulation functions in C with examples.

Section C (Essay Type)

Answer any **one** *of the following questions.*
Each question carries 10 *marks.*

20. What is recursion ? Write a recursive function to reverse a given string.

21. List and discuss the different storage class specifications in C language.

(1 × 10 = 10 marks)