

**QP CODE**

**Enrollment Number:** .....

**B1035**

**Name:** .....

**BCA DEGREE EXAMINATIONS, APRIL 2025**  
**First Semester**  
**B21CA02DC – Problem Solving and Programming in C**  
**(2024 July Admissions)**

**Time: 3 Hours**

**Max Marks: 70**

**Section A**

**Answer any ten of the following questions in a word or sentence each. Each question carries 1 mark.**

1. The computer understands only ----- language.
2. \_\_\_\_\_ statement changes the control flow of code to another statement without any condition.
3. List down any two primitive datatypes in C.
4. What will be the value stored in variable 'a', "int a = 4.5 + 6.5;" ?
5. What does the format specifier '%d' represent in printf()?
6. What is the syntax of a for loop in C?
7. How do you declare an array of 20 integers in C?
8. Which function is used to find the length of a string in C?
9. What is the return type of a function that does not return any value in C?
10. What is recursion in C?
11. Which method is the default in C (call by value / call by reference)?
12. How do you access a member of a structure using a structure variable?
13. What is the scope of the 'extern' class specifier?
14. Which function is used to move a file pointer to a specific position within a file?
15. What will be the output?

```
void main()
{
    register x=10;
    printf("%d",&x);
}
```

**(1X10=10)**

## Section B

**Answer any five of the following questions in two or three sentences each. Each question carries 2 marks.**

16. Write a C program to print a message.
17. What is the difference between variables and symbolic names?
18. What is the purpose of putchar() and puts() functions in C?
19. How does a for loop differ from a while loop in C?
20. Define one dimensional array with example.
21. What is the difference between & and \* in pointers?
22. Discuss any two advantages and disadvantages of Recursion.
23. Write a program to swap two numbers using call by reference.
24. Write a short note on preprocessor directive.
25. What is the significance of argc and argv in command line arguments?

**(2X5=10)**

## Section C

**Answer any five of the following questions in a paragraph each. Each question carries 4 marks.**

26. Write an algorithm to find the sum of the first 100 natural numbers.
27. List down the rules for naming identifiers
28. Describe constants in C
29. Write down the difference between break and continue statement.
30. Explain the functions malloc(), calloc(), realloc(), and free() in C with examples.
31. Write a program to find, sum of squares of n natural numbers using do while loop.
32. Write down the differences between recursion and iteration.
33. Compare Structure and Union with example.
34. Which functions are used for reading and writing operations in file? Explain.
35. Draw a flow chart to find biggest among two numbers.

**(4X5=20)**

## Section D

**Answer any two of the following questions in three pages each. Each question carries 15 marks.**

36. Explain various operators used in C with example.
37. Discuss about if-else-if ladder and switch statement with example.
38. Discuss different types of arrays with examples, and write a program that demonstrates the use of a one-dimensional array to find the average of 10 numbers.
39. Describe storage classes with examples.

**(15X2=30)**