# C Language Question Bank (Filtered from CPP QB)

## Part A

1. List and explain the usage of any 4 built-in keywords
2. tabularize C primitive data types with its memory size and value range
3. what is the use of ternary operator
4. explain the difference between pre and post increment decrement operator
5. explain the difference between division (/) and mod (%) operator
6. what is the difference between int and float operands with division (/) operator?
7. Explain with example: %5.2f format specifier
8. explain any four logical operator
9. explain any four relational operator
10. define variable and constant with Syntax and examples
11. explain the use of #define with example
12. Discuss about escape characters and format specifiers with example snippet
13. list and explain any four preprocessor
14. define built in function
15. define library function with example
16. define function and its types
17. explain the use of return keyword with example
18. List various types control statements
19. define looping statement and list a few
20. define conditional control statement and list a few
21. define unconditional control statement and list
22. define algorithm with example
23. define flowchart with example
24. List and explain different flowchart blocks with example
25. Discuss Common problem classifications:

Ans:

| **Type of Problem** | **Description** | **Example** |
| --- | --- | --- |
| **Simple** | Few steps, easy to solve | Add two numbers |
| **Complex** | Needs functions/loops | Sorting or Factorial |
| **Numeric** | Mathematical operations | Sum, Average |
| **Non-Numeric** | Logical or data-based | Character test, String compare |
| **Real-Time** | Practical applications | Marksheet, Billing system |

1. Steps involved in problem solving:

Ans:

| **Step** | **Name** | **Purpose** |
| --- | --- | --- |
| 1 | Understanding the Problem | Identify input and output |
| 2 | Analyzing the Problem | Break into smaller parts |
| 3 | Developing an Algorithm | Create step-by-step logic |
| 4 | Drawing Flowchart | Visualize solution |
| 5 | Writing Code | Implement logic in C |
| 6 | Testing & Debugging | Verify correctness |
| 7 | Documentation | Record and maintain program |

1. Short notes on moduler programming in C:

Ans: **Modular Programming** is a software design technique where a program is **divided into separate modules (functions)**, and each module performs a **specific task**.

Each module can be **developed, tested, and debugged independently**, and then combined to form a complete program.

✅ Easier to **write, test, and debug**  
✅ Improves **readability** and **reusability**  
✅ Supports **team development**  
✅ Makes the program **more flexible and maintainable**

## Part B

1. explain comment statement and its different types with example
2. What are arrays? How do you declare an array?
3. How do you initialize a double dimensional string array?
4. What is recursion? Give an example
5. define looping statement with a program
6. define conditional control statement with a program example
7. define unconditional control statement with example program
8. explain the syntax and use of if-else block with example
9. explain the use of switch case with example program
10. Compare and Explain the syntax of do loop and while loop with an example snippet
11. Write a program with your own header file
12. Differentiate If-Else-If with Switch case with an example
13. Write a program with switch-case to check keyed character is Vowel or Consonants
14. Write a program to explore any 3 built-in string handling functions
15. Explain various parts of Functions with your own User-Defined function
16. List and explain different storage classes in C
17. Define Pointer variable and the usage of ‘&’ and ‘\*’ operators with an example
18. Define Structure with example
19. Differentiate structure and Arrays
20. Differentiate structure and union, with example
21. Define Union with example
22. What is recursive function, explain with example
23. How to define global constant in C
24. How to create a text file using c program
25. Different modes of file open function in c
26. Write a prog to read and display text file content
27. Write a prog to write user input to a text file
28. Data structures:

Ans:

| **Type** | **Description** | **Example Use** |
| --- | --- | --- |
| **Array** | Fixed-size collection of similar elements | Storing student marks |
| **Structure (struct)** | Grouping different data types | Employee record (ID, name, salary) |
| **Stack** | LIFO (Last-In-First-Out) | Undo operations, expression evaluation |
| **Queue** | FIFO (First-In-First-Out) | Process scheduling, printing tasks |
| **Linked List** | Dynamically linked elements | Dynamic memory management |
| **Tree** | Hierarchical structure | Directory management, decision trees |
| **Graph** | Network structure | Social networks, routing paths |

## Part C

1. define control statements
2. Explain the steps involved in creating user defined function with an example program