C Interview Questions & Answers

1. What is C?

Answer: C is a procedural programming language developed by Dennis Ritchie.

2. Difference between C and C++?

Answer: C is procedural; C++ supports OOP.

3. What is a pointer?

Answer: Variable storing memory address.

4. What is a null pointer?

Answer: Pointer pointing to no valid memory.

5. Difference between malloc() and calloc()?

Answer: Malloc: uninitialized; Calloc: zero-initialized.

6. What is segmentation fault?

Answer: Accessing invalid memory.

7. What are storage classes?

Answer: auto, register, static, extern.

8. What is the difference between structure and union?

Answer: Structure: all members occupy memory separately; Union: shares memory.

9. Explain recursion.

Answer: Function calling itself.

10. What is a static variable?

Answer: Variable that retains value across function calls.

11. What is a header file?

Answer: Contains function declarations and macros.

12. What is the difference between = and ==?

Answer: = assigns; == compares.

13. What is a constant?

Answer: Fixed value that cannot be changed.

14. Explain arrays.

Answer: Collection of elements of same type.

15. What is a function pointer?

Answer: Pointer storing address of a function.

16. Difference between call by value and call by reference?

Answer: Value: copy passed; Reference: original variable passed.

17. What is typedef?

Answer: Defines new name for existing type.

18. What is preprocessor?

Answer: Runs before compilation (#include, #define).

19. Difference between break and continue?

Answer: Break: exit loop; Continue: skip iteration.

20. What is a macro?

Answer: Preprocessor directive replaced before compilation.