1. What is C programming language?

Answer: C is a general-purpose, procedural programming language used to develop system software, embedded systems, and application programs. It is known for its speed and efficiency.

2. What are the basic data types in C?

Answer: The basic data types in C are int, float, char, and double. They are used to store integers, decimal values, characters, and large decimal numbers.

3. What is the difference between local and global variables?

Answer: Local variables are declared inside a function and can be used only within that function. Global variables are declared outside all functions and can be accessed throughout the program.

4. What is a pointer?

Answer: A pointer is a variable that stores the address of another variable. It is mainly used for dynamic memory allocation and efficient data handling.

5. What is the difference between malloc() and calloc()?

Answer: malloc() allocates memory without initializing it, while calloc() allocates memory and initializes all values to zero.

6. What is a structure in C?

Answer: A structure is a user-defined data type that allows grouping of different data types under a single name.

7. What is the difference between an array and a pointer?

Answer: An array stores multiple values of the same type, while a pointer stores the address of a variable. Arrays have fixed size, pointers are flexible.

8. What is recursion?

Answer: Recursion is a technique where a function calls itself to solve a problem by breaking it into smaller sub-problems.

9. What is the use of sizeof operator?

Answer: The sizeof operator is used to find the memory size (in bytes) of a data type or variable.

10. What is the difference between break and continue?

Answer: break terminates the loop immediately, while continue skips the current iteration and moves to the next one.