

## Computer Science - 10th Class Computer Science English Medium Chapter 4 Preparation

Q1. Define Loop Structure.

**Ans 1:** Loop Structure is used to repeat a number of statements up to a specified number of times or until a specified condition is fulfilled. A loop is a set of statements in a programming language that allows one or more statements to be repeatedly executed as many times as required. There are three types of loop which are used in C program.

**Ans 2:** \* for loop  
\* While loop  
\* do while loop

Q2. Define Array initialization.

**Ans 1:** Assigning values to an array for the first time, is called array initialization. An array can be initialized at the time of its declaration, or later. Array initialization at the time of declaration can be done in the following manner.  
Data \_ type array \_ name { N } = {Value}, value 2, value, 3....., value N }

Q3. Write down the general Structure of for loop.

**Ans 1:** General structure of for loop.

**Ans 2:** for (initialization: condition : increment/ decrement)

**Ans 3:** {  
Code to repeat:  
}

Q4. How we initialize an array in C language.

**Ans 1:** Assigning values to an array for the first time, is called array initialization. An array can be initialized at the time of its declaration, or later. Array initialization at the time of declaration can be done in the following manner.  
data \_\_\_\_ type array ..... name { N } = { value}, value 2, value 3..... value N }

Q5. What is the most important property of an array.

**Ans 1:** An important property of array is that it stores all the values at consecutive locations inside the computer memory.

**Ans 2:** It can hold multiple values of same data type.

Q6. What is data structure? And why we need data structure.

**Ans 1:** Data structure is a container to store collection of data items in a specific layout. High level programming languages provide data structures in order to store and organize data. Different data structures are available in C programming language. Array is the one of the most common data structure in C language.

**Ans 2:** Need: We need data structure to store and process large amount of data.  
Example: The marks of 100 students we does not need to declare 100 variables we should use array.

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Q7. What is index or subscript.

**Ans 1:** Each location or element of an array is identified by its position value called the subscript or index.

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Q8. What are uses of loop in an array.

**Ans 1:** Loops can be used to read and write values in arrays. As variables can be used as array indexes, so we can use loops to perform different operations, on arrays, If we want to display the whole array, then instead of writing all the elements one by one, we can loop over the array elements by using the loop counter an array index.

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Q9. How we can exit from the for loop.

**Ans 1:** Condition is checked in the loop and if it turns out to be false, then we come out of loop.

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Q10. Define Nested loops.

**Ans 1:** When we use a loop inside another loop. it is called nested loop structure, In nested loop an inner loop is completely enclosed inside an outer loop. We use nested loops to repeat a pattern multiple times.

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