

Standard 11

Lesson 9

Introduction to C++(Up to Operators)

2MARKS

1. Why C++ is called hybrid language?

C++ supports both procedural and Object Oriented Programming paradigms. Thus, C++ is called as a **hybrid language**.

2. List any two benefits of learning C++?(Any two points)

- C++ is a highly portable language and is often the language of choice for multi-device, multi-platform app development.
- C++ is an object-oriented programming language and includes **classes, inheritance, polymorphism, data abstraction and encapsulation**.
- C++ has a rich function library.
- C++ allows exception handling, inheritance and function overloading which are not possible in C.
- C++ is a powerful, efficient and fast language. It finds a wide range of applications – from GUI applications to 3D graphics for games to real-time mathematical simulations.

3. Define character set. Give example.

Character set is a set of characters which are allowed to write a C++ program. A character represents any alphabet, number or any other symbol (special characters) mostly available in the keyboard.

4. Write a note on reserved words? Give some example.

Keywords are the reserved words which convey specific meaning to the C++ compiler. They are the essential elements to construct

C++ programs. C++ is a case sensitive programming language so, all the keywords must be in lowercase.

Eg., int.,float,short

5. Define tokens and name the tokens available in C++?

C++ program statements are constructed by many different small elements such as commands, variables, constants and many more symbols called as operators and punctuators. These individual elements are collectively called as **Lexical units** or **Lexical elements** or **Tokens**.

6. What do you mean by identifier?

Identifiers are the user-defined names given to different parts of the C++ program viz. variables, functions, arrays, classes etc., These are the fundamental building blocks of a program. Every language has specific rules for naming the identifiers.

7. Name some rules for naming an identifier.

- The first character of an identifier must be an alphabet or an underscore (_).
- Only alphabets, digits and underscore are permitted. Other special characters are not allowed as part of an identifier.
- C++ is case sensitive as it treats upper and lower-case characters differently.
- Reserved words or keywords cannot be used as an identifier name.

8. What do you mean by constants?

Literals are data items whose values do not change during the execution of a program. Therefore Literals are called as Constants.

9. List the types of constants available in C++?

- Integer Literals
- Floating-point Literals
- Boolean Literals.
- Character Literals.
- String Literals.

10. Define numeric constants?

The numeric constants are numeric values, which are used as constants.

10. What are the types of Numeric constants?

Integer Constants (or) Fixed point constants.

Real constants (or) Floating point constants.

12. What do you mean by implicit conversion?

If a Decimal constant declared with fractions, then the compiler will take only the integer part of the value and it will ignore its fractional part. This is called as “Implicit Conversion”.

13. What do you mean by integers?

Integers are whole numbers without any fractions.

14. What are the types of integer constants?

An integer constant must have at least one digit without a decimal point. It may be signed or unsigned. Signed integers are considered as negative

15. What do you mean by Hexadecimal constant?

Any sequence of one or more Hexadecimal values (0 9, A F) that starts with 0x or 0X is considered as an Hexadecimal constant.

16. What do you mean by real constants?

A real or floating point constant is a numeric constant having a fractional component. These constants may be written in fractional form or in exponent form.

17. Write a note on Exponent form of real constants?

Exponent form of real constants consists of two parts: **(1) Mantissa** and **(2) Exponent**. The mantissa must be either an integer or a real constant. The mantissa followed by a letter E or e and the exponent. The exponent should also be an integer.

18. What do you mean by Boolean literals?

Boolean literals are used to represent one of the Boolean values (True or false). Internally true has value 1 and false has value 0.

19. What do you mean by Character Constants?

A character constant is any valid single character enclosed within single quotes. A character constant in C++ must contain one character and must be enclosed within a single quote.

20. What do you mean by String Literals?

Sequence of characters enclosed within double quotes are called as String literals. By default, string literals are automatically added with a special character '\0' (**Null**) at the end.

21. What do you mean by Non-printable characters?

Non-printable characters are those characters that cannot be typed directly from a keyboard during the execution of a program in C++, for example: backspace, tabs etc. These non-printable characters can be represented by using escape sequences.

22. Expand the following terms a) ANSI b) ASCII

a)ANSI- American National Standard Institute

b) ASCII-American Standard Code for Information Interchange.

23. what do you mean by escape sequence?

An escape sequence is represented by a backslash followed by one or two characters. Eg., \n- Newline

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3 MARKS

1. Write a short note on history of C++?
2. List the benefits of C++?
3. Give short notes on Character set in C++?
4. Give short notes on Tokens in C++?
5. Give short notes on Keywords in C++?
6. Explain the rules for naming an identifier?
7. Explain about integer constant?
8. Write the following real constants into exponent form: i) 32.179
ii) 8.124 iii) 0.00007
9. What is the significance of null (\0) character in a string?
10. Write the following real constants into fractional form: i) 0.23E4
ii) 0.517E-3 iii) 0.5E-5

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BASEERA NASHRIN,
nashrinbaseera@gmail.com