Summary Note.

W-(1) What is statement and Block on C++ concept?

⇒ Statement :- is a single instruction that performs an action. Indepependent unit in a program, just like a sentence in the English Language.

- Statements is a fragments of the program that are executed in sequence and every C++ statements have to end with a semicolon.
- A statement canbe an expression, a declaration, a function call, or a control structure such as:- (IF, else, switch, for, while, or do-while).

For example:- 'x=10;' or 'cout << "Hello, World!";' are both individual statements in C++.

⇒ Block:- ablock is a compound statement enclosed in curly braces '{}'. It can contain multiple statements. All the statements inside the block are treated as one unit. There is no need to put asiemi-colon after the closing brace to end a complex statement.

Blocks are often used in control flow structures and functions. For example:- .cpp

C++ .cpp

```
void myFunction(){
    int x=5;    if (x>0) {
                    cout << "Positive num";
                } else {
                    cout << "Non-Positive num";
                }
}
```

② → What is Input/Output stream?

⇒ Input/out put stream(s) is/are Data stream represe
the flow of data b/n program and it's environm
particurarly input/output devices.

⇒ Input stream is data for the program to use typica
originates at the keyboard. It is a sequence
of character that represent data being read
from a source. This data is processed by the progra

~~C++ standard OUTPUT stream(c~~

C++ Standard Input stream (cin) → console input
Syntax: cin >> variable;

More than one variable separated by extraction (>>)
operator can be used to capture data from keyboard
with single cin input stream.

⇒ OUTPUT stream is the program's output. It is a
sequence of charactors that ~~othe~~ represent data
being written to a destination, such as the screen
a file, or another program. This allows the program
to communicate information to the user/another sys

C++ Standard OUTPUT stream (cout) → console output
is the object to display information on computers
screen in C++. Syntax: cout << data;

more than one data separated by insertion (<<)
operator can be sent to screen with single cou
output stream.

(3,) → What is Standard Library ?

=▷ Standard Library, often referred to as the STL The heart of the C++ Standard library the part that influenced its overall architecture is the standard template library (STL). The STL is a generic library that provides solutions to managing collections of data with modern and efficient algorithms.

- The STL provides a bunch of collection classes that meet various needs, together with several algorithms that operate on them.
- All components of the STL are templates, so they can be used for arbitarary element types.
- The STL gives C++ anew level of abstraction.

③. Standard libraries Section

```
#include <iostream>
using namespace std;
```

#include :- is a pre-processer commond that copies and postes the files entire text, specified b/n the angle brackets into the source code.

<iostream> :- is a standard hader file that should came with the C++ compiler. This header file contains code for displaying & receiving user input

using name space std; :- use functions & objects

It is a prefix that is applied to all names in a specific set. std :: cin std :: cout

- The STL gives

(4.) * What is Comment in C++ programming?

⇒ Comments are non-executable statements used to document and explain code.

- They are ignored by the compiler and are intended for human readers.

- Comments can be helpful in clarifying the over all program's purpose, explaining what a group of statements is meant to accomplish, or explaining what one line is intended to do.

⇒ C++ supports two types of comments:

- Line comment begins with two slashes (//) & continues to the end of the line. eg, // this is a comment

- Block comment begins with the symbols /* & end with */. eg, /* This is a block comment */ → multi-line

→

→ Single-Line Comments
// This is single-line comment

→ Block (Multi-line comments) (/*....*/)

Sample Program

```
#include <iostream> ——→ Input/output stream
using namespace std;
int age = 34; // Global variable
int main() { ——→ open block          ——→ Comment / Single-line Commen
    int age = 14; // Local variable
    cout << "Local variable " << age << endl;
// use resolution operator to use global variable
    cout << "Global variable " << ::age << endl;
    return 0;
} ——→ close block
```