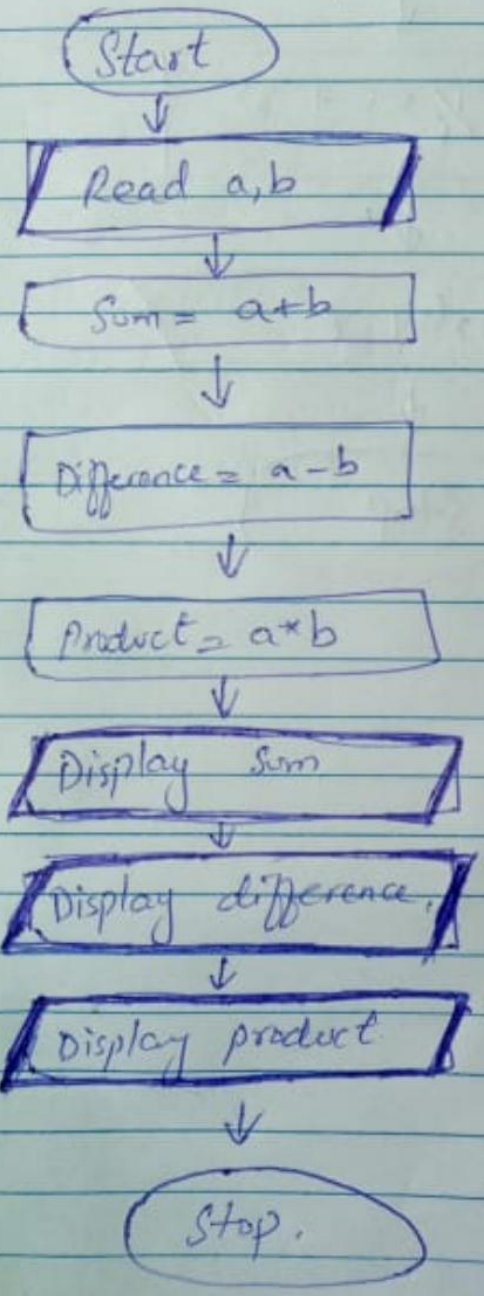
Day: M T W T F S Date: __/__/__

NAME	JIBRAN
ID	14472
SUBJECT	Programming Fundamental
DEPARTMENT	BS (CS)
SEMESTER	4th

Q(1) part (a)



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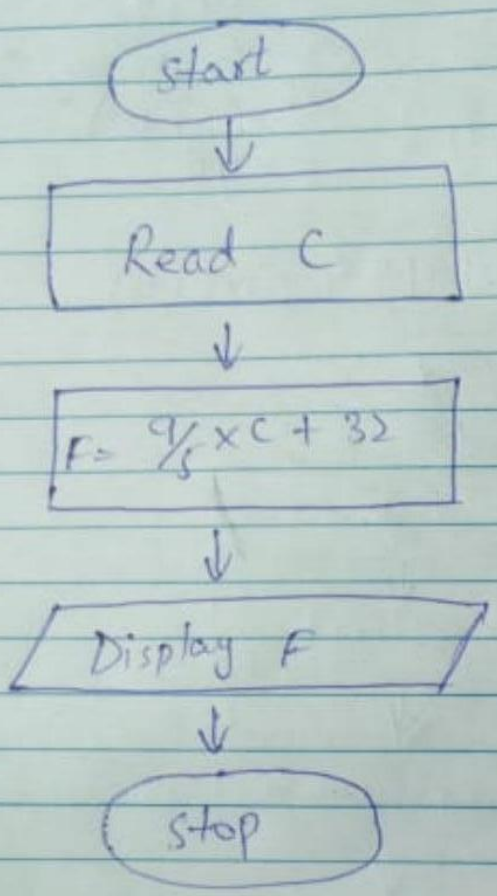
Q(1) part (b)



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Q(2) part (a)

```
#include <iostream>
using namespace std;
int main ()
{
    int height = 2;
    int width = 5;
    int area;
    int perimeter;
    area = height * width;
    cout << " area is \n";
    cout << area;
    perimeter = 2*(height + width);
    cout << "\nperimeter is \n";
    cout << perimeter;
}
```

(5)

(4)

Name Jibran
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Day: M T W T F S

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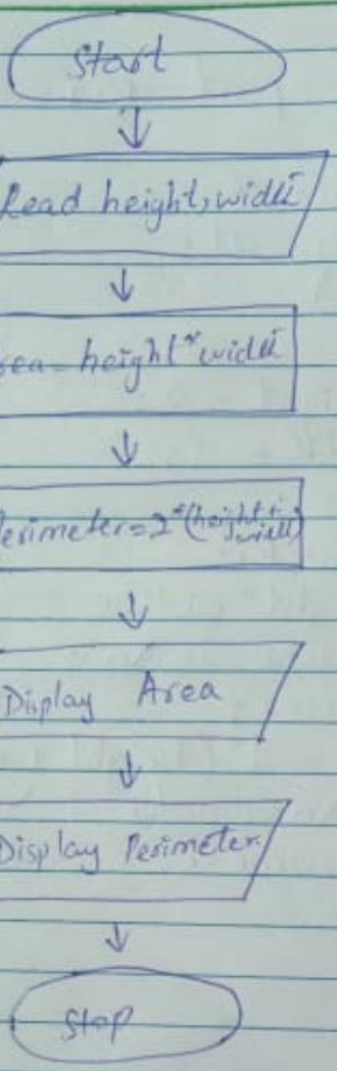

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Q(2) part (b)

```
#include<iostream>
using namespace std;
int main()
{
    int R=5;
    float pi=3.14;
    float Area;
    float circumference;
    Area= pi*R*R;
    cout<<"Area of circle is=";
    cout<<Area;
    cout<<"\n circumference is=";
    circumference= 2*pi*R;
    cout<<circumference;
}
```

(6)

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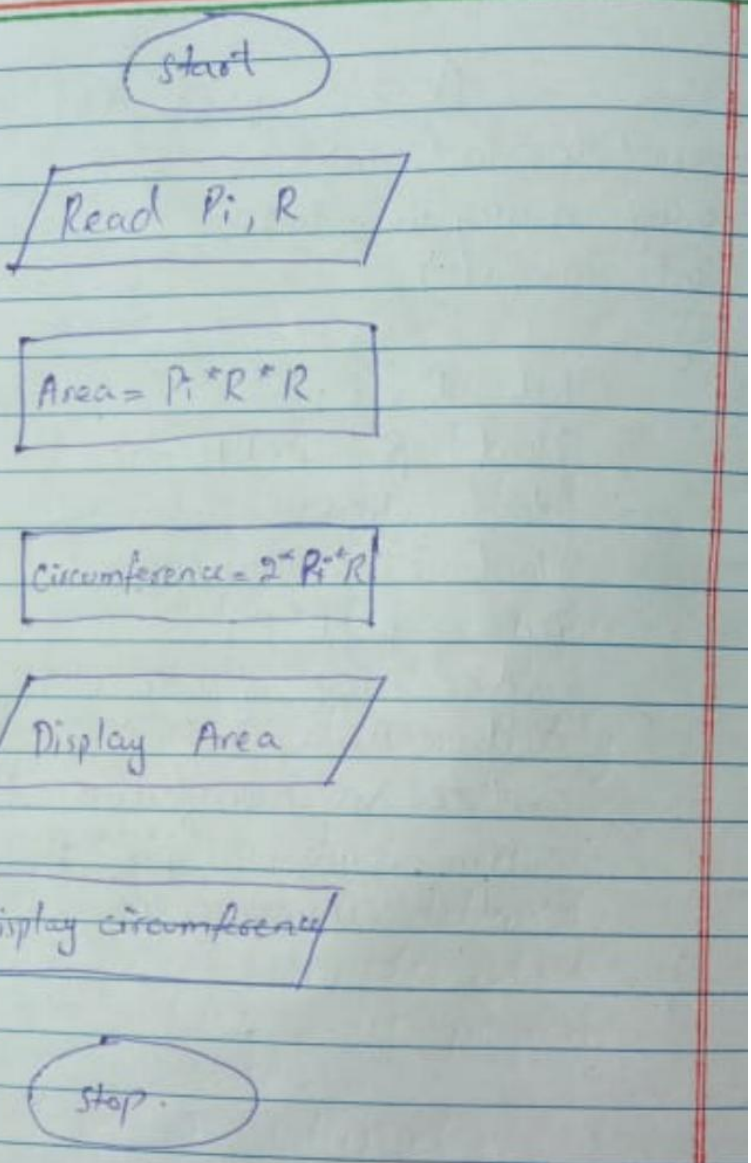

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Q (3) part (a)

Discuss different types of programming languages?

Types of programming languages:-

(1) Procedural Programming language (PPL):-

The procedural programming language is used to execute a sequence of statements which lead to a result. Typically, this type of programming language uses multiple variables, heavy loops and other elements, which separates them from functional programming languages.

(2) Functional Programming language (FPL):-

Functional Programming language typically stored data, frequently avoiding loops in favour of recursive functions. The functional programming's primary focus is on the return values of functions, and side effects and different suggests that storing state are powerfully discouraged.

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(3) Object-oriented Programming language:-

This programming language views the world as a group of objects that have internal data and external accessing parts of that data. The aim this programming language is to think about the fault by separating it into a collection of objects that offer services which can be used to solve a specific problem.

(4) Scripting Programming language:-

These programming languages are often procedural and may comprise object-oriented language elements but they fall into their own category as they are normally not full-fledged programming languages with support for development of large systems.

(5) Logic programming language:-

These types of languages let programmers make declarative statements and then allow the machine to reason about the consequences of those statements. In a sense, this language

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doesn't tell the computer how to do something but employing restrictions on what it must consider doing.

Q(3) part (b)

There are two types of translators to translate higher level language to machine language.

* Compiler.
* Interpreter.

(1) Compiler:-

It is a program translator that translates the instruction of a higher level language to machine language.

* It is called compiler because it compiles machine language instructions for every program instructions of higher level language.
* This compiler is a program translator like assembler but more sophisticated. It scans the entire program first and then translate it into machine code.
* The programs written by the programmer in higher language is

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called source program. After this program is converted to machine languages by the compiler it is called object program.

* Interpreter:-
* An interpreter is another type of program translator used for translating higher level language into machine language.
* It takes one statement of higher level languages, translate it into machine language and immediately execute it
* Translation and execution are carried out for each statement.
* It differs from compiler, which translate the entire source program into machine code.
* The advantage of interpreter compared to compiler is its fast response to changes in source program do not require large memory in computer.

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