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Dep : BScs  
Paper : Programming Fundamental  
Exam : Summer  
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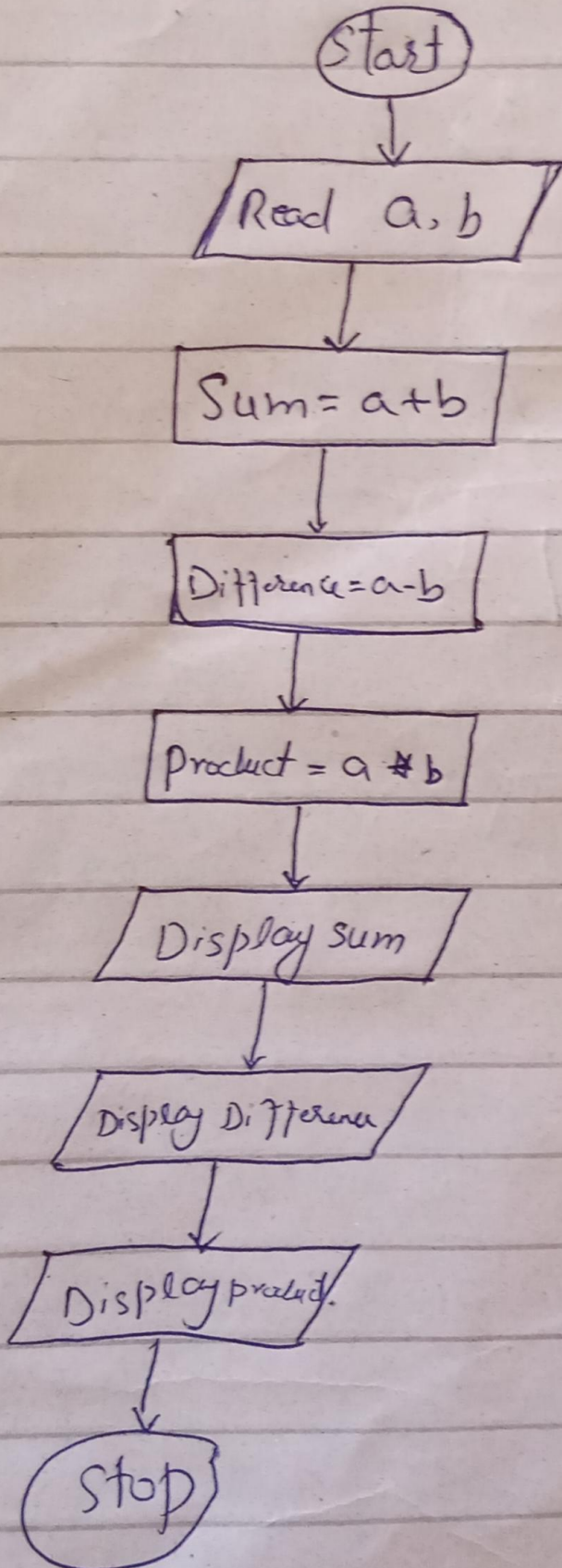
Awais Ghaffar

(1)

(Q: NO: 1. Part A)

(Part a)

Flow chart.



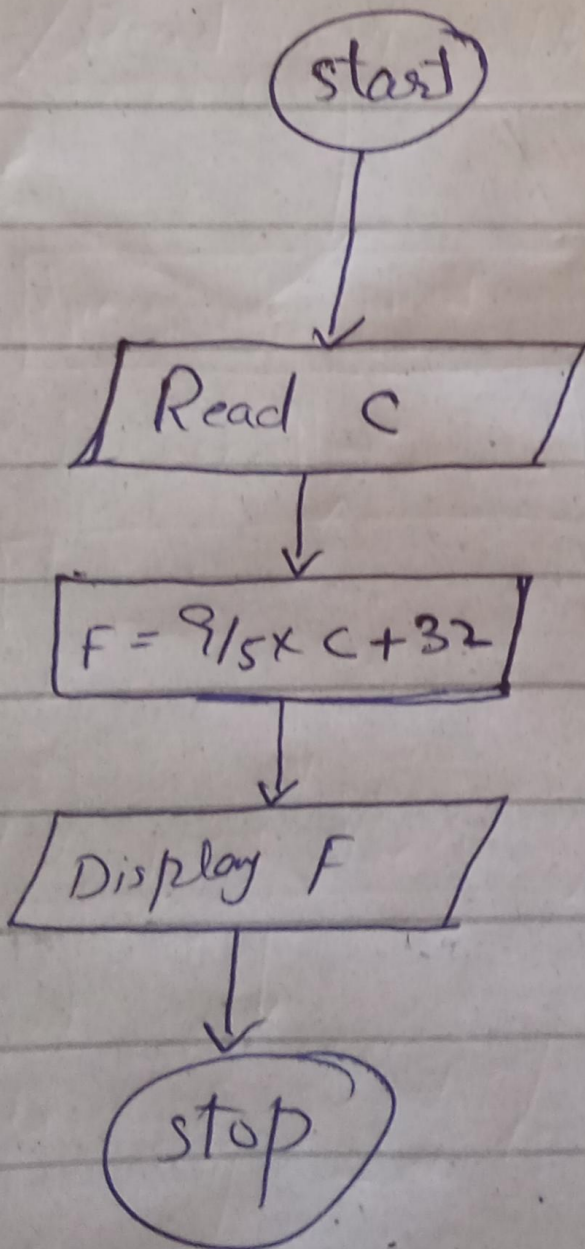


2

Q: No. 1

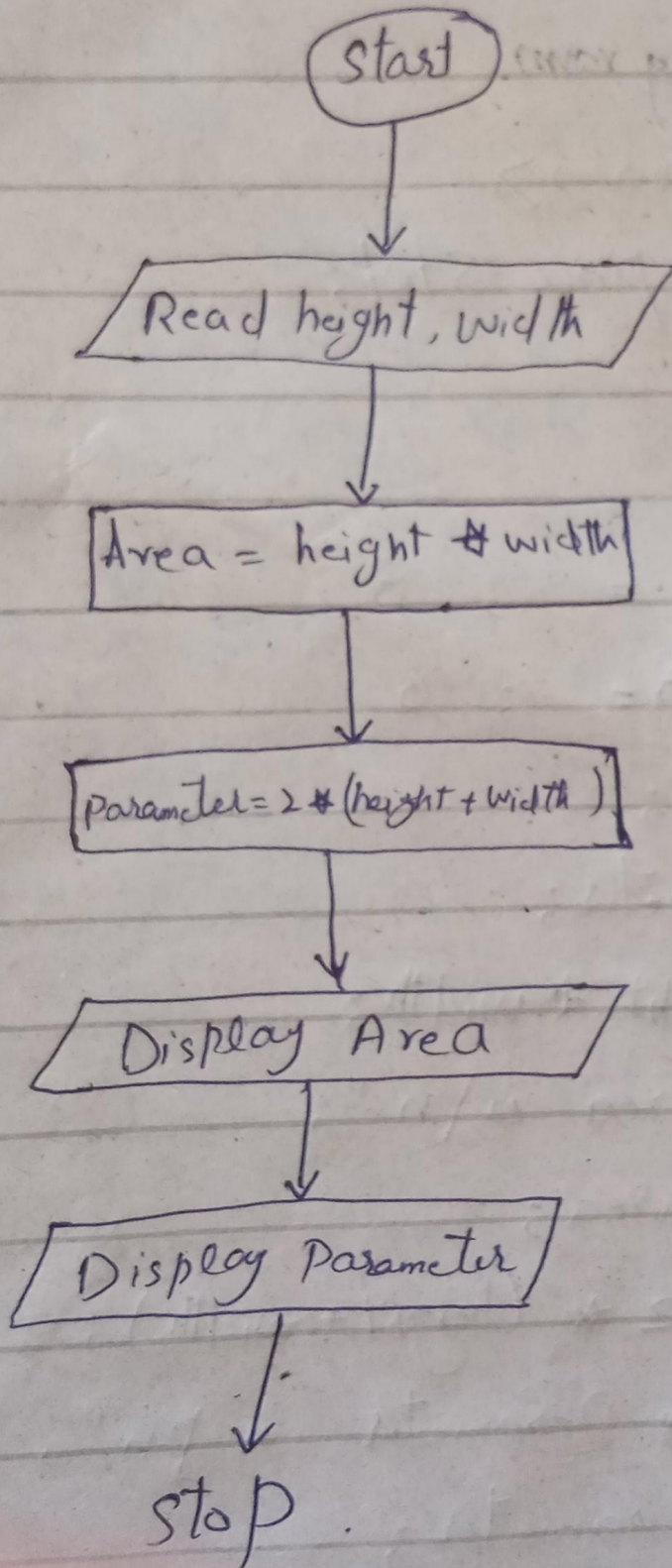
(Part b)

(Flow chart)



3

(Q: NO: 2 a) part





Q4

(Q: NO: 2 part a)

Program.

```
#include <iostream>
```

```
using namespace std;
```

```
int main ()
```

```
{
```

```
int height = 8;
```

```
int width = 6;
```

```
int area;
```

```
int Parameter;
```

```
area = height * width;
```

```
cout << "area is \n";
```

```
cout << area;
```

```
Parameter = 2 * (height + width);
```

```
cout << "Parameter is \n";
```

```
cout << Parameter;
```

```
}
```

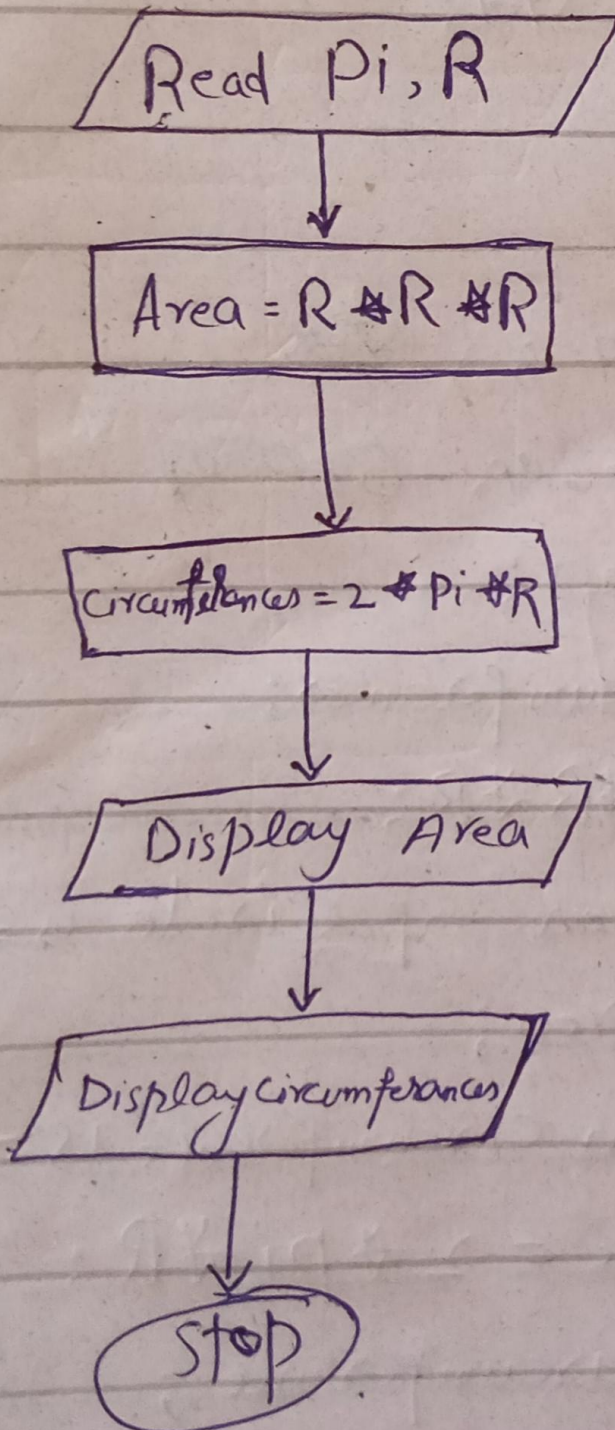


5

(Q: NO: 2 b) Part.

Flow chart.

start





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(Q: NO: 2 b.)

Program.

```
#include <iostream>
```

```
using namespace std;
```

```
int main ()
```

```
{
```

```
    int R = 7 ;
```

```
    float pi = 3.14 ;
```

```
    float area ;
```

```
    float Circumferences ;
```

```
    Area = pi * R * R ;
```

```
    cout << "Area of Circle is = " ;
```

```
    cout << Area ;
```

```
    cout << "\n Circumference is = " ;
```

```
    Circumference = 2 * pi * R ;
```

```
    cout << Circumference ;
```

```
}
```



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(Q: NO: 3 a)

## Types of Programming Language

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### 1- Scripting Programming Language?

These programming languages are often procedural and many comprise object-oriented language elements, but they fall into their own category as they are normally not full-fledged programming languages with support ~~the~~ for development of large systems. For example, they may not have compile-time type checking. Usually these languages require tiny syntax to get started.

### 2) Procedural Programming Language

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



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Programming language Functions of Procedural language may control ~~language~~ variables, other than function's value returns. For example, printing out information.

3-

### Functional Programming Language

Functional Programming language typically uses stored data, frequently avoiding loops in favor of recursive functions.

The functional Programming's language primary focus is on the return values of functions, and side effects and different suggests that storing state are powerfully discouraged. For example in an exceedingly pure useful language if a function is termed it's expected that the function not modify or perform any opp. it may, however, build algorithmic calls and alter the parameters of these calls. Functional languages are usually easier and build it easier to figure on abstract issues. however, they'll even the further from the machine



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therein their programming model makes it difficult to know precisely language!

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

To call these groups "types of language" is really a bit confusing. It's easy to program in an object-oriented style in C language. In truth most of the language include ideas and features from various domains which only helps to increase the usefulness of these types of language. Nevertheless, most of the programming language do not best in all styles of programming.



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### 5- 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 world by separating it into a collection of objects that offer services which can be used to solve a specific problem. One of the main principles of object oriented programming language is encapsulation that everything an object will need must be inside of the object. This language also emphasizes reusability through inheritance and the capacity to spread current implementations without having to change a great deal of code by using polymorphism.



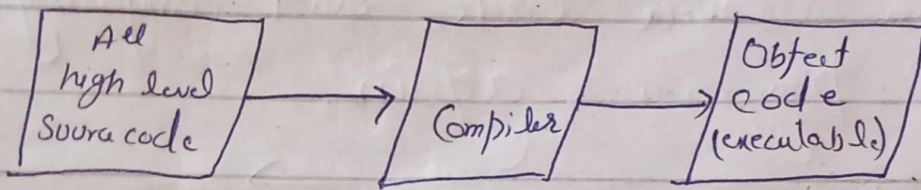
Q.No. 3

(Part b)

Following translator are there.

A Translator will convert the source code into machine code.

-(Compiler)



Compiler are used to to translate a program written in a high level language into machine language.

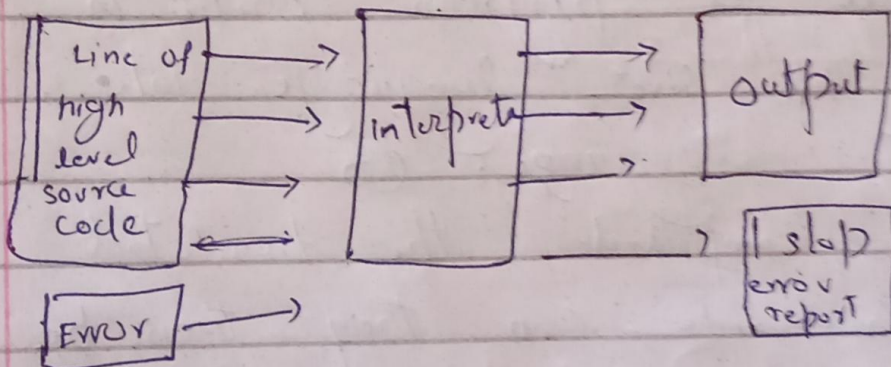
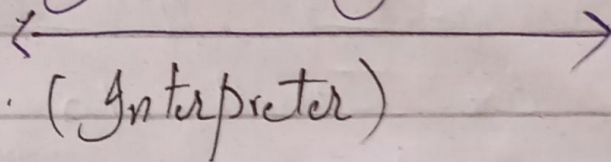
Once compiled the translated program file can ~~then~~ then be directly used by the computer and is independently executable. Compiling may take some time ~~about~~ but the translated program can be used again and again without the need for re compilation.

An error report is often produced after the full program has been translated.



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Error report is often produced after the full program has been translated. Errors in the program code may cause a computer to crash. These errors can only be fixed by changing the original source code and compiling the program again.



Interpreter programs are able to read, translate and execute one statement at a time from a high level language program.

The interpreter stop when a line of code is reached that contains an error.

Best of luck! END.