

Name Jibkhar Khan

ID 14693

class BS (SE)

section (B)

subject Programming
Fundamental

Teacher Name Dr. Fazal-e-Madik

②

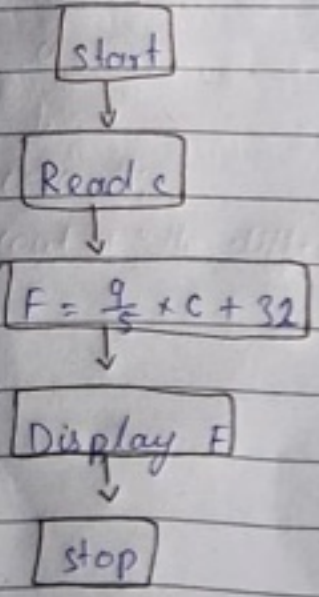
product.

```
int a;  
int b;  
int c;  
a = 2;  
b = 4;  
c = a * b;  
cout << "product is " << c;  
}
```

== * == *

Q1 (b)

Ans 1 (b)



== * == *

Q 1 (a)

(Sum)

Ans 1 (a)

```
int a;  
int b;  
int c;  
a = 10;  
b = 2;  
c = a + b;  
cout << "The sum" + c;  
}
```

Difference-

```
int a;  
int b;  
int c;  
a = 20;  
b = 2;  
c = a - b;  
cout << "The difference" + c;  
}
```

③

Q 2 (a)

Ans. (a)

Area of Rectangle

```
#include <iostream>
using namespace std;
main()
{
    float length, width, Area;
    cout << "Enter Area of T";
    cin >> length >> width;
    Area = 2 * (length * width);
    cout << Area;
}
```

X ——— X ——— X

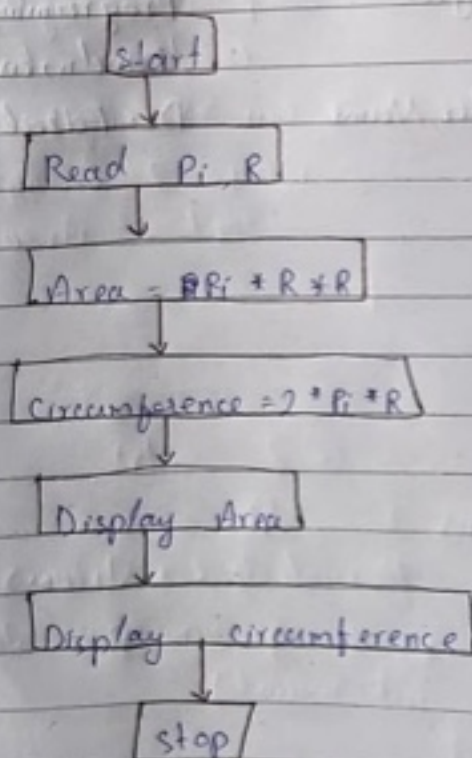
Q 2 (b)

Ans 2 (b)

```
#include <iostream>
using namespace std;
int main()
{
    int R=5;
    float pi=3.14;
```

(4)

```
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;  
}
```



= * = * = *

Q 3 (a)

Ans (a) Programming Languages -

↳ Programming languages specially developed so that you could pass your data instructions to the computer to do specific job.

↳ There are two major types of programming languages.

↳ Low level language

↳ High level language

↳ Low level language are further divided into Machine language and Assembly language.

↳ High level language are for scientific application. FORTRAN and C language are used. on the other hand COBOL is used for business applications.

↳ Machine language:

↳ Machine language is the only language that is directly understood by the computer. It does not need any translator program.

↳ The only advantage is that program of machine language run very fast.

Q

↳ Higher level language are simple language that use English and mathematical symbols like +, -, %, / etc. for its program's construction.

↳ Any higher level language has to be converted to machine language for the computer to understand.

∴ Advantages of High level language:

↳ Higher level language have a major advantage over machine and assembly languages that higher level language are easy to learn and use (similar to the languages used by in our day life).

* ——— * ——— * ——— *

Q3 (b)

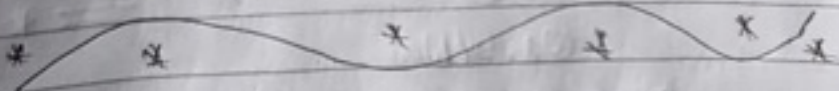
Ans (b)

Compiler - It is a program translator that translates the instructions of a higher level language to machine language.

↳ It is called compiler because it compiles machine language instructions for every program's instruction of higher level language.

(9)

- ↳ Thus compiler is a program translator like assembler but more sophisticated. it scans the entire program first and then translates it into machine code.
- ↳ The programs written by the programmer in higher level language is called source program. After this program is converted to machine languages by the compiler it is called object program.
- ↳ A compiler can translate only those source programs, which have been written in that language.



(7)

ii. Assembly language:-

- ↳ To program in assembly you need to understand concepts behind machine language and execution - fetch cycle of CPU.
- ↳ Assembly is a machine specific language.
- ↳ Although assembly and machine language might look similar, they are in fact two different types of languages.
 - ↳ Assembly consists of both binary and simple words.
 - ↳ Machine code composed only of 0's and 1's.

iii. High Level language:-

- ↳ Although assembly language greatly improved programming efficiency, they still required programming to concentrate on the hardware they were using. Working with symbolic language was also very tedious, because each machine instruction had to be individually coded. The desire to improve programming efficiency and to change the focus from the computer to the problem being solved led to the development of high-level language.

(6)

↳ There is nothing "below" machine language - only hardware.

↳ Impossible for humans to read - consists of only 0's and 1's.

↳ In the earliest days of computer, the only programming language available were machine language. Each computer had its own machine language, which was made of streams of 0s and 1s.

↳ Assembly language :-

↳ The next evolution in programming came with the idea of replacing binary code for instruction and addresses with symbols. Because they used symbols,

↳ these language were first known as symbolic language. The set of these mnemonic language were later referred to as assembly language to machine language.

↳ It is the first step to improve the programming structure, you should know that computer can handle number and letter.

↳ This translator program used to Assembly language is called Assembler.

