

Assignment #2

Chapter 8 : Operators and Expressions in C++

1. Predict the output of the following program :

```
#include<iostream.h>
void main()
{
    int x=5; int y=0;
    y= x++ + 10;
    cout<<"y ="<<y <<endl;
    cout<<"x= "<<x<<endl;
    y=((x>=5)?1 : 0);
    cout<<" Now the value of y is :"<<y;
}
```

2. Rewrite the corresponding C++ expressions for the following :

- (i) $\frac{\cos x \cdot \tan^{-1} x}{A^2 + B^2}$
(ii) $4 - 6e^{2y}$
(iii) $|x| + y$ is not equal to $|x + y|$

3. Given the following set of identifiers -

```
char x;
int y;
short sh;
float fval;
long lval;
```

Identify the datatype of the following expressions :

- (i) $y * fval + sh$
(ii) $fval/lval + int/sh$

4. Evaluate the following expressions :

- (i) $x + y < z \ \&\& \ x + z > y \ || \ x - z \leq y - x + 2$
if $x=4, y=5$ and $z=2$
(ii) $z > x \ \&\& \ x + 3 \ || \ !(2 * y + z - x)$
if $x=10, y=15, z=5$
(iii) $c = a - (b++) * (--a)$
if $a=5, b=3$ and $d=15$

5. Predict the output of the following program :

```
#include<iostream.h>
#include<math.h>
void main()
{
    float x,y;
```

```
x=9.15;
y= - 6.08;
int z=2;
cout<<ceil(x)<<endl;
cout<<floor(y)<<endl;
cout<<pow(z,10)<<endl;
cout<<sizeof(x)<<endl;
z*=10;
cout<<"z = " <<z<<endl;
}
```

PROGRAMS

1. WAP to accept marks of a student out of 100 and display "PASS " if the student scores ≥ 40 and "FAIL" otherwise.
2. WAP to accept a number and display its square root and modulus.
3. Do quest no- 5 of the assignment (use of math.h)