



The Creators College of Science & Commerce Abbottabad

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Subject Name: - Computer Science

Chapter No: - THREE [3]

Class: - 2st Year

LONG Questions

Question # 4: Evaluate the following?

- [false && true] || true**

This statement will check two conditions. False **AND** True **OR** True.

- [false && true] || false || true**

This statement will check three conditions. False **AND** True **OR** False **OR** True.

- [5 > 6 || 4 > 3] && [7 > 8]**

This statement will check two conditions. 5 is greater than 6 **OR** 4 is greater than 3 **AND** 7 is greater than 8.

- ! [7 > 6 || 3 > 4]**

This statement will check only one conditions. **NOT EQUAL** to 7 is greater than 6 **OR** 3 is greater than 4.

Question # 5: Pick those variable from the following list which are improperly declared and named. Also, describe the reason of its invalidity?

- int sum;**

Valid identifier.

- int cats=5, dogs=5;**

Better to initialize at one line then assignment at the next line.

- int my variable name;**

Spaces are not allowed.

- int void =5;**

Not valid, void is a reserved word. We cannot use that.

- int nAngle;**

A should also be small letter.

- int 3some;**

Identifier name should not start from digit.

- int meters_of_pipe;**

Not too long.

- **int length, width=5;**

Better to initialize at one line then assignment at the next line.

Question # 6: Write a C++ program to get six subjects marks of a student and then calculate the total, average percentage and display them on the screen?

```
#include<iostream.h>
#include<conio.h>
void main()
{
    clrscr();
    int mark[6], i;
    float sum=0;
    cout<<"Enter marks obtained in Physics, Chemistry, Maths, CS, English and Bio:";
    for(i=0; i<6; i++)
    {
        cin>>mark[i];
        sum=sum+mark[i];
    }
    float avg=sum/6;
    float perc;
    perc=(sum/600)*100;
    cout<<"Average Marks = "<<avg;
    cout<<"\nPercentage = "<<perc<<"%";
    getch();
}
```

Question # 7: Write a C++ program to find out maximum value out of three integers using conditional operator?

```
#include <iostream>
using namespace std;
int main()
{
    float n1, n2, n3;
    cout<<"Enter three numbers : ";
    cin>>n1>>n2>>n3;
    if((n1 >= n2) &&(n1 >= n3))
    cout<<"Largest number is : "<<n1;
    else if ((n2 >= n1) && (n2 >= n3))
    cout<<"Largest number is : "<<n2;
    else
    cout<<"Largest number is : "<<n3;
    return 0;
}
```

Question # 8: Write C++ program to find out the roots of a quadratic equation?

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

```

int main() {

float a, b, c, x1, x2, determinant, realPart, imaginaryPart;
cout << "Enter coefficients a, b and c: ";
cin >> a >> b >> c;
determinant = b*b - 4*a*c;

if (determinant > 0) {
    x1 = (-b + sqrt(determinant)) / (2*a);
    x2 = (-b - sqrt(determinant)) / (2*a);
    cout << "Roots are real and different." << endl;
    cout << "x1 = " << x1 << endl;
    cout << "x2 = " << x2 << endl;
}

else if (determinant == 0) {
    cout << "Roots are real and same." << endl;
    x1 = (-b + sqrt(determinant)) / (2*a);
    cout << "x1 = x2 = " << x1 << endl;
}

else {
    realPart = -b/(2*a);
    imaginaryPart =sqrt(-determinant)/(2*a);
    cout << "Roots are complex and different." << endl;
    cout << "x1 = " << realPart << "+" << imaginaryPart << "i" << endl;
    cout << "x2 = " << realPart << "-" << imaginaryPart << "i" << endl;
}
return 0;
}

```

Question # 9: Write a C++ program to find out the area of rectangle and display the result on the screen?

```

#include<iostream.h>
#include<conio.h>
#include<math.h>

void main()
{
clrscr(); //to clear the screen
float a,b,c,s,r,area;
int ch;
cout<<"***Menu***\n1.Area of circle\n2.Area of Rectangle";
cout<<"\n3.Area of triangle\nEnter your choice:";
cin>>ch;

switch(ch)
{
case 1:
{
cout<<"\nEnter radius of the circle:";
cin>>r;
area=3.14*r*r;

```

```

break;
}
case 2:
{
cout<<"\nEnter length and breadth:";
cin>>a>>b;
area=a*b;
break;
}
case 3:
{
cout<<"\nEnter three sides of the triangle:";
cin>>a>>b>>c;
s=(a+b+c)/2;
area=sqrt(s*(s-a)*(s-b)*(s-c));
break;
}
default: cout<<"\nWrong choice...!!!";
break;
}
cout<<"Area="<<area;
getch(); //to stop the screen
}

```

Question # 10: Write a C++ program to get the age of a student from the user at run time and display it on the screen?

```

#include <conio>
#include <iostream>
void main()
{
int age,roll,clas;
char name[20],city[20];
cout<<"Enter Name : ";
cin>>name;
cout<<"Enter Age : ";
cin>>age;
cout<<"Enter Roll No : ";
cin>>roll;
cout<<"Enter Class : ";
cin>>clas;
cout<<"Enter City Name : ";
cin>>city;
cout<<"\n Student Name : "<
cout<<"\n Student Age : "<
cout<<"\n Student Roll No : "<
cout<<"\n Student Class : "<
cout<<"\n Student City Name : "<
getch();
}

```