CHPTER NO:3 (Object Oriented Programming Using C++)

[exercise]

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**Note: Question no 1,2,3 are M.C.Q.S Part.**

**Qs.no.(6):- Write a C++ program to get 5 subjects marks of a student and then calculate its total, average and percentage and display them on screen?**

**Ans:-**

#include<iostream>

using namespace std;

int main(){

int cs,maths,phy,eng,urdu;

float average,per,obtain;

cout<<"Enter marks of cs : ";

cin>>cs;

cout<<"Enter marks of maths : ";

cin>>maths;

cout<<"Enter marks of phy : ";

cin>>phy;

cout<<"Enter marks of eng : ";

cin>>eng;

cout<<"Enter marks of urdu : ";

cin>>urdu;

//total(obtain marks)=paper1+paper2+paper3+........

obtain=cs+maths+phy+eng+urdu;

//average=total/number of items(papers).

average=obtain/5;

//percentage=(Obtain marks/Total marks)\*100.

per=(obtain/500)\*100; //every paper marks is 100,so total marks will be 500.

cout<<"\n Average = "<<average;

cout<< "\n Percentage = "<<per<<" %";

return 0;

}

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**Qs.no.(7):- Write a C++ Program to find out maximum value out out of three(4) integers using conditional operator.**

**Ans:-**

#include<iostream>

using namespace std;

int main(){

int a,b,c,d,max;

cout<<"Enter 4 Integers(with spaces) : ";

cin>>a>>b>>c>>d;

max=a;

max=(b>max)?b:max;

max=(c>max)?c:max;

max=(d>max)?d:max;

cout<<"Maximum integer is "<<max;

return 0;

}

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**Qs.no.(8):-Write a C++ program to find out the roots of a quadratic equation.**

**Ans:-**

#include<iostream>

#include<cmath>

using namespace std;

int main()

{

float a,b,c;

float disc,root1,root2;

cout<<"Enter values of A,B & C(with spaces): ";

cin>>a>>b>>c;

disc=b\*b-4\*a\*c; //disc=discrimenent;

if(disc==0) {

root1=(-b)/(2\*a);

root2=root1;

cout<<"Roots are real and equall"<<endl;

cout<<"Root1=Root2 = "<<root1;

} else if(disc>0) {

root1=-(b-sqrt(disc)/2\*a);

root2=-(b+sqrt(disc)/2\*a);

cout<<"Roots are Real and Unequall"<<endl;

cout<<"Root1(-) = "<<root1<<endl;

cout<<"Root2(+) = "<<root2;

} else { //(disc<0)

root1=(-b)/(2\*a);

root2=sqrt(-disc)/(2\*a);

cout<<"Roots are Imaginary"<<endl;

cout<<"Root1(-) = "<<root1<<endl;

cout<<"Root2(+) = "<<root2;

}

return 0;

}

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**Qs.no.(9):- Write a C++ program to find out the *rectangle* and display the result on screen.**

**Ans:-**

#include<iostream>

using namespace std;

int main()

{

int area,length,width;

cout<<"Enter length of Rectangle : ";

cin>>length;

cout<<"\nEnter width of Rectangle : ";

cin>>width;

area=length\*width; //area of rectangle = Length x Width.

cout<<"\n Area of Rectangle is : "<<area;

return 0;

}

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**Qs.no.(10):-Write a C++ program to get the age of a student from the user at run time and display it on screen.**

**Ans:-**

#include<iostream>

using namespace std;

int main()

{

int age;

cout<<"Enter Age of the Student : ";

cin>>age;

cout<<"Age of the Student is "<<age<<" Year";

return 0;

}

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