CHPTER NO:4 (control structure)

[exercise]

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

**Qs.no(4): Write a C++ program that takes three numbers as input and displays whether all numbers are equal or not by using nested if condition.**

**Ans:-**

#include<iostream>

using namespace std;

int main() {

int a,b,c;

cout<<"Enter 3 Numbers : "<<endl;

cin>>a>>b>>c;

if(a==b || b==c || c==a) //

OUTPUT:

Enter 3 Numbers : 2 2 2

All numbers are Same!!

{

cout<<"All numbers are Same!!";

}

else {

cout<<"All numbers are not Same!!\a";

}

return 0;

}

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**Qs.no.(5):- Write a program using for loop that prints product of all odd numbers from 1 to 10.**

**Ans:-**

#include<iostream>

using namespace std;

int main()

{

int c,product=1;

OUTPUT:

The Product of odd integers from 1 to 10 are : 945

for(c=1; c<=10; c=c+2) //c=1+2 =>3 then c=3+2 =>5 ...

product\*=c; //or product=product\*c.

cout<<"The Product of odd integers from 1 to 10 are : "<<product; //it will give 945.

return 0;

}

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**Qs.no.6:- Write a C++ program using while loop that takes an integer for a variable n value , and returns the sum of all the numbers from 1 to n value.**

**Ans:-**

#include<iostream>

using namespace std;

int main()

{

int n,c=1,sum=0;

cout<<"Enter Integer : "<<endl;

cin>>n;

while(c<=n)

OUTPUT:

Enter Integer : 6

Sum of Integer from 1 to 6 = 21

{

sum=sum+c;

c++;

}

cout<<"Sum of Integer from 1 to "<<n<<" = "<<sum;

return 0;

}

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**Qs.no.(7):- Write a program that display the product components of a number without repeating them.**

**For example if the user enters 24, it displays 24\*1, 12\*2, 8\*3 and 6\*4 .**

**Ans:-**

OUTPUT:

Enter Number(calculate product components) : 24

The product Components of 24 are :

24x1

12x2

8x3

6x4

4x6

3x8

#include<iostream>

using namespace std;

int main()

{

int n,s=1;

cout<<"Enter Number(calculate product components) : "<<endl;

cin>>n;

cout<<"The product Components of "<<n<<" are : "<<endl;

for(int i=n; i>=3; i--)

for(int j=1; j<=n; j++)

{

if(i\*j==n)

{

cout<<i<<"x"<<j<<endl;

s=j+i;

}

}

return 0;

}

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**Qs.no.(8):- Write a C++ program to read the alphabet of a person and exit when the user enters dot(.) from the keyboard.**

**Ans:-**

#include<iostream>

#include<stdio.h>

using namespace std;

int main() {

char alph[20],ch;

do {

cout<<"Enter Address of Person : ";

cin>>alph;

cout<<"\nContinue or Terminate:(press dot \".\") "<<endl;

ch=getch();

} while(ch!='.');

return 0;

}

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**Qs.no.9:- Write a C++ program to find out the area of a triangle and if any side s zero then display the message "There is no Triangle".**

**Ans:-**

#include<iostream>

#include<cmath>

using namespace std;

int main() {

float s,area\_of\_tri;

int a,b,c;

cout<<"Enter 3 Sides of Triangle(with space) : ";

cin>>a>>b>>c;

if(a==0 || b==0 || c==0) {

cout<<"There is no Triangle\n";

OUTPUT:

Enter 3 Sides of Triangle(with space) : 45 46 47

Area of Triangle = 915.388

}

/\*As we know that, area\_of\_triangle=square\_root(s(s-a)(s-b)(s-c))

and, s=(a+b+c)/2;\*/

else {

s=(a+b+c)/2;

area\_of\_tri=sqrt(s\*(s-a)\*(s-b)\*(s-c));

cout<<"Area of Triangle = "<<area\_of\_tri;

}

return 0;

}

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**Qs.no.(10):- Write a C++ program to input a character from the keyboard and display the message after testing whether it is Vowel or Consonant.**

**Ans:-**

#include<iostream> #include<iostream>

using namespace std; using namespace std;

int main() { int main() {

char alph, vowel; char alph, vowel;

cout<<"Enter Any Character : "; cout<<"Enter Any Character : ";

cin>>alph; cin>>alph;

if(aplh==’a’){

switch(alph) { cout<<”Vowel”;

case 'a': }

cout<<"Vowel"; else if(alph==’e’){

break; cout<<”Vowel”;

case 'e': }

cout<<"Vowel"; else if(alph==’i’){

break; cout<<”Vowel”;

case 'i': }

cout<<"Vowel"; (OR) else if(alph==’o’){

break; cout<<”Vowel”;

case 'o': }

cout<<"Vowel"; else if(alph==’u’){

break; cout<<”Vowel;

case 'u': }

cout<<"Vowel"; else{

OUTPUT:

Enter Any Character : u

Vowel

break; cout<<"Consonant\a";

}

default: return 0;

cout<<"Contonant\a"; }

}

return 0;

}

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**END OF CHPTER NO : 04**