**C Programming and Data Structures**

**Computer Science and Technology-B**

**Week 1**

1. a) Write a C program to swap the two numbers.

Program

**a (i) without using temporary variable**

#include<stdio.h>

void main()

{

int a,b;

printf("enter the numbers");

scanf("%d",&a);

printf("enter the numbers");

scanf("%d",&b);

printf("the value of the numbers before swapping are %d,%d\n",a,b);

a=a+b;

b=a-b;

a=a-b;

printf("the value of the numbers after swapping are %d,%d",a,b);

}

**Sample input**

Enter the number 20

Enter the number 30

**Sample output**

the value of the numbers before swapping are 20,30

the value of the numbers after swapping are 30,20

**Program a(ii) using temporary variable**

#include<stdio.h>

void main()

{

int a,b,temp;

printf("Enter the numbers");

scanf("%d",&a);

printf("Enter the numbers");

scanf("%d",&b);

printf("The value of the numbers before swapping are %d,%d\n",a,b);

temp=a;

a=b;

b=temp;

printf("The value of the numbers after swapping are %d,%d",a,b);

}

**Sample input**

Enter the number 22

Enter the number 33

**Sample output**

The value of the numbers before swapping are 22,33

The value of the numbers after swapping are 33,22

b) Write a C Program to find the eligibility of admission for a Professional course based on the following criteria:

Marks in Maths >=65

Marks in Physics >=55

Marks in Chemistry>=50

OR

Total in all three subject >=180

**Program**

#include<stdio.h>

int main()

{

int maths,physics,chemistry,Total;

printf(" Enter the marks in maths");

scanf("%d",&maths);

printf(" Enter the marks in physics");

scanf("%d",& physics);

printf(" Enter the marks in chemistry ");

scanf("%d",& chemistry);

Total=maths+physics+chemistry;

if(maths>=65 && physics>=55 && chemistry>=65 || total>=180)

{

printf("Eligible");

}

else

{

printf("Not eligible");

}

return 0;

}

**Sample input**

Enter the marks in maths 67

Enter the marks in physics 43

Enter the marks in chemistry 45

**Sample output**

Not eligible