NAME: AJAKAYE JADESOLA STELLA

MATRIC NUMBER: 18/SCI01/010

COURSE CODE: CSC206

REVISION QUESTIONS: PART 2

15) **Identifying Errors:**

// program to find prime factor of a number //

#include<stdio.h> [ here instead of (stdio.h>]

int main(){

int counter ,N ,is\_prime,i;[here an underscore is put to space the is prime]

printf("Enter a Number");

scanf("%d",& N);

printf("list of prime factors of %d",&N);[here the & and sign is missing]

/\*check for every number between 1 to N, whether it divides N\*/

 for (counter = 2; counter<=N;counter++);

{

 /\*if counter completely divides N,\*

 then is is a factor of N if (N%counter= 0)

 {/\*check if counter is also a prime number \*/

If ( is\_prime ==1)[here if statement is missing]

 for(i=2; i<=(counter/2);i++)

 {

 if (counter % i ==0)

 { is\_prime=0;

 Break; [ break ends with semicolon in this conditional statement]

 }

 if (is\_prime==1)

 printf("%d",counter);

}

 return 0;

}

}

16) **What are Operators:** Operators are the symbols which are used to perform logical and mathematical operations in C programs

Types of Operators:

1. **Arithmetic Operators**: They are used to perform mathematical operations like addition, subtraction, multiplication and division.
2. **Relational Operators**: They are used to compare the value of two variables.
3. **Logical Operators**: They are used to perform logical operations on the given two variables.
4. **Assignment Operators**: They are used to assign the values to the variables in C programs.
5. **Bitwise Operators**: They are used to perform bit operations on a given two variables.
6. **Increment/Decrement Operator**: They are used to either increase or decrease the value of a variable by one(1).

 17)

 #include <stdio.h>

#define Principal 100000

#define Rate 5

#define Time 4

int main() {

 int I;

 I= (Principal\*Rate\*Time)/100;

 printf("THE INTEREST AFTER 4YEARS is %d", I);

 return 0;

}

18)

#include<stdio.h>

int main(){

int t,card,accreditation,nationality;

 /\*input age,card,accreditation,nationality\*/

printf("Enter the age of the person: ");

scanf("%d",&t);

printf("Pick the appropriate option:\n");

printf("1. YES\n");

printf("2. NO\n");

printf("Do you have voters card:");

scanf("%d",&card);

printf("Pick the appropriate option:\n");

printf("1. YES\n");

printf("2. NO\n");

printf("Are you accredited:");

scanf("%d",&accreditation);

printf("Pick the appropriate option:\n");

printf("1. YES\n");

printf("2. NO or Others\n");

printf("Are you a Nigerian:");

scanf("%d",&nationality);

 /\*check voting eligibility\*/

if (t>=18 && card== 1 && accreditation== 1 && nationality== 1)

{

 printf(" ELIGIBLE-You can Vote\n");

 }

else if(t<=17 && card== 2 && accreditation== 2 && nationality== 2)

{

 printf("NOT ELIGBLE-You can't vote\n");

 }

return 0;

}

19) i)

 # include<stdio.h>

int main(){

 float a;

 int n ;

int temp=36.0;

printf("Enter number of a\n");

scanf("%f",&a);

 if(a > temp){

 printf("The patient is sick\n ");

}

if (a <temp){

 printf("The patient is not sick\n ");

return 0;

}

 }

ii) #include<stdio.h>

int main(){

 float a;

 int n ;

int temp = 36.0;

printf("Enter number of a\n");

scanf("%f",&a);

 if(a >=temp){

 printf("The patient is sick\n ");

 }

 else{

 printf("The patient is not sick\n ");

 }

return 0;

}

 20)

21) #include<stdio.h>

#include<math.h>

#define principal 1000530.00

#define rate 3

int main (){

 int Year;

 double Amount;

 printf("%4s%21s\n","Year","Amount on deposit");

 for (Year= 1; Year<=5; Year++)

 {

 Amount = principal \*pow(1 + rate,Year);

 printf ("%4d%21.2f\n", Year,Amount);

 }

 return 0 ;

 }

22)

 i) #include<stdio.h>

int main ()

{

 int A = 30,B = 10,C ;

 C = (A < B? 1:2);

 {

 printf("The result is %d",C);

 }

 return 0;

 }

ii) #include<stdio.h>

#define True 0

#define False 1

int main ()

{

 int A = 30, B = 10,D;

 D=(A==B ? True : False);

 {

 printf("The result is %d", D);

 }

 return 0 ;

 }

 iii) #include<stdio.h>

 int main()

{

 int A= 30,B=10,C;

 C = (B < A ? 5:14);

 {

 printf("The result is %d",C);

 }

 return 0 ;

 }

 iv) #include<stdio.h>

int main()

{

 int A = 30, B = 10 , D;

 D = (A >= B ? 0:1);

 {

 printf("The result is %d",D);

 }

 return 0;

}

23)

#include <stdio.h>

#include <math.h>

int main()

{

 int a, b, c, d;

 double root1, root2;

 printf("Enter a, b and c where a\*x\*x + b\*x + c = 0\n");

 scanf("%d%d%d", &a, &b, &c);

 d = b\*b - 4\*a\*c;

 if (d < 0) { //complex roots

 printf("First root = %.2lf + i%.2lf\n", -b/(double)(2\*a), sqrt(-d)/(2\*a));

 printf("Second root = %.2lf - i%.2lf\n", -b/(double)(2\*a), sqrt(-d)/(2\*a));

 }

 else { //real roots

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

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

 printf("First root = %.2lf\n", root1);

 printf("Second root = %.2lf\n", root2);

 }

 return 0;

}

24)

 #include <stdio.h>

#include <math.h>

int main()

{

 int a, b, c, d;

 double root1, root2;

 printf("Enter a, b and c where a\*x\*x + b\*x + c = 0\n");

 scanf("%d%d%d", &a, &b, &c);

 d = b\*b - 4\*a\*c;

 if (d < 0) { //complex roots

 printf("First root = %.2lf + i%.2lf\n", -b/(double)(2\*a), sqrt(-d)/(2\*a));

 printf("Second root = %.2lf - i%.2lf\n", -b/(double)(2\*a), sqrt(-d)/(2\*a));

 }

 else { //real roots

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

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

 printf("First root = %.2lf\n", root1);

 printf("Second root = %.2lf\n", root2);

 }

 return 0;

 }

25)

 #include <stdio.h>

 int main()

 {

 printf(" \*\*\*\*\*\*\* \*\*\* \*\*\* \*\*\*\*\*\*\*" );

 }

26)

 #include <stdio.h>

 int main()

 {

 printf( "\*\*\*\*\*\*\*\*\*\*\*\* " );

 printf( "\*\*\* " );

 printf( "\*\*\* " );

 printf( "\*\* " );

 printf( "\*\*\* " );

 printf( "\*\* " );

 printf( "\* " );

 printf( "\*\*\*\*\*\*\*\*\*\*\*\* " );

 }

 27)

 #include <stdio.h>

int main()

{

 int num1;

 float num2;

 double num3;

 printf("Enter an integer value : ");

 scanf("%d", &num1);

 printf("The integer number is %d\n",num1);

 printf("Enter a float value : ");

 scanf("%f", &num2);

 printf("The float number is %f\n",num2);

 printf("Enter a double value : ");

 scanf("%lf", &num3);

 printf("The double number is %f",num3);

}