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);

}