QUESTION:1

```
#include <stdio.h>
void main()
{
   int  j, sum = 0;
   for (j = 1; j <= 10; j++)
   {
      sum = sum + j;
      printf("%d ",j);
   }
   printf("The Sum is : %d", sum);
}
```

OUTPUT:-

1 2 3 4 5 6 7 8 9 10

The Sum is : 55

QUESTION:-2

```
#include <stdio.h>
int main() {
   int n, i=1;
   printf("Enter an integer: ");
   scanf("%d", &n);
   while (i <= 10)
  {
      printf("%d * %d = %d \n", n, i, n * i);
      ++i;
   }
   return 0;
}
```

OUTPUT:-

Enter an integer: 2

* 1 = 2

2 * 2 = 4

2 * 3 = 6

2 * 4 = 8

2 * 5 = 10

2 * 6 = 12

2 * 7 = 14

2 * 8 = 16

2 * 9 = 18

2 * 10 = 20

QUESTION:-3

```
#include<stdio.h>
int main()
{
   int num,i=1, sum = 0;
   printf("Enter a number\n");
   scanf("%d", &num);
   do
   {
     sum = sum +2*i-1;
     i++;
    }
    while(i < num);
   printf("Sum of ODD integer number is %d\n", sum);
```

```
   return 0;
}
```

OUTPUT

```
Enter a number
4
Sum of ODD integer number is 9
```

QUESTION:-4

```
#include <stdio.h>
void main()
{
  int i,j;
  for(i=1;i<=5;i++)
  {
          for(j=1;j<=i;j++)
            printf("*");
          printf("\n");
  }
}
```

OUTPUT:

```
*
**
***
****
```

QUESTION:-5

```
#include <stdio.h>
void main()
```

```
{
  int i,j,k=1;
  for(i=1;i<5;i++)
  {
        for(j=1;j<=i;j++)
          printf("%d",k++);
        printf("\n");
  }
}
```

OUTPUT:

1

23

456

78910

QUESTION:-6

```
#include<stdio.h>
int main()
{
int x=1,i=1,j;
do{
j=5-i;
   do{
   printf(" ");
   j--;
   }while(j>0);
j=i;
   do{
```

```
    printf("%d ",x);x++;j--;
    }while(j>0);
printf("\n");
i++;
}while(i<5);
return 0;
}
```

OUTPUT:

QUESTION:-7

```
#include<stdio.h>
int main()
{
    int row,c=1,x,i,j;
    printf("Input number of rows: ");
    scanf("%d",&row);
    for(i=0;i<row;i++)
    {
        for(x=1;x<=row-i;x++)
        printf("  ");
        for(j=0;j<=i;j++)
        {
```

```
        if (j==0||i==0)
           c=1;
        else
          c=c*(i-j+1)/j;
        printf("% 4d",c);
      }
      printf("\n");
   }
}
```

OUTPUT:-

```
Input number of rows: 6
                1
              1   1
            1   2   1
          1   3   3   1
        1   4   6   4   1
```

QUESTION:-8

```
#include <stdio.h>
int main() {
   int i, n, x = 0, y = 1, nt;
   printf("Enter the num: ");
   scanf("%d", &n);
   printf("Fibonacci Series: ");

   for (i = 1; i <= n; ++i) {
      printf("%d, ", x);
```

```
        nt = x + y;
        x = y;
        y = nt;
    }
 return 0;
}
```

OUTPUT:

Enter the num: 8

Fibonacci Series: 0, 1, 1, 2, 3, 5, 8, 13,

QUESTION:-9

```
#include<stdio.h>
void main()
{
    int n, i=1, sum=0;
    printf("\n Enter a number: ");
    scanf("%d", &n);
    while(i<n)
    {
        if(n%i==0)
        {
            sum=sum+i;
        }
        i++;
    }
    if(sum==n)
        printf("\n %d is a Perfect Number.",n);
```

```
    else
        printf("\n %d is Not a Perfect Number.",n);
}
```

OUTPUT:

Enter a number: 4

4 is Not a Perfect Number.

QUESTION:-10

```
#include<stdio.h>
int main()
{
int num,originalNum, r, result = 0;
    printf("Enter a three digit integer: ");
    scanf("%d", &num);
    originalNum = num;
  while (originalNum != 0)
            {
        r = originalNum % 10;
             result=(result+(r * r * r));
        originalNum /= 10;
    }
if (result == num)
        printf("%d is an Armstrong number.", num);
    else
        printf("%d is not an Armstrong number.", num);

    return 0;
}
```

OUTPUT:

Enter a three digit integer: 345

345 is not an Armstrong number.

QUESTION:-11

```
#include <stdio.h>
int main() {
   int n, i, flag = 0;
   printf("Enter a num: ");
   scanf("%d", &n);
   for (i = 2; i <= n / 2; ++i)
   {
      if (n % i == 0) {
         flag = 1;
         break;
      }
   }
 if (n == 1) {
      printf("1 is neither prime nor composite.");
   }
   else {
      if (flag == 0)
         printf("%d is a prime number.", n);
      else
         printf("%d is not a prime number.", n);
   }
 return 0;
```

```
}
```

OUTPUT:

Enter a num: 8

8 is not a prime number.

QUESTION:-12

```
#include <stdio.h>

void main(){
   int num,r,sum=0,t;

   printf("Input a number: ");
   scanf("%d",&num);
   t=num;
  do{
       r=num % 10;
       sum=sum*10+r;
       num=num/10;
   }
       while(num!=0);
printf("reverse order : %d \n",sum);
}
```

OUTPUT:

Input a number: 67

reverse order : 76

QUESTION:-13

```
#include <stdio.h>
void main()
{   long int n,i,t=9;
        int sum =0;
        printf("enter the number or terms :");
        scanf("%ld",&n);
        for (i=1;i<=n;i++)
        { sum +=t;
          printf("%ld   ",t);
          t=t*10+9;
        }
        printf("\nThe sum of the series = %d \n",sum);
}
```

OUTPUT:

enter the number or terms :9

99 999 9999 99999 999999 9999999 99999999 999999999

The sum of the series = 1111111101

QUESTION:-14

```
#include<stdio.h>
int main()
{

float x,sum,t,d;
        int i=1,n;
        printf("Input the Value of x :");
        scanf("%f",&x);
```

```
        printf("Input the number of terms : ");
        scanf("%d",&n);
        sum =1; t = 1;
        while (i<n)
        {
          d = (2*i)*(2*i-1);
          t = -t*x*x/d;
          sum =sum+ t;
          i++;
        }
printf("\nthe sum = %f\nNumber of terms = %d\nvalue of x = %f\n",sum,n,x);
}
```

OUTPUT:

```
Input the Value of x :2
Input the number of terms : 4
the sum = -0.422222
Number of terms = 4
value of x = 2.000000
```

QUESTION:-15

```
#include <stdio.h>
#include <math.h>
int main()
{
        int x,sum,ctr;
```

```
        int i=1,n,m,mm,nn;
        printf("Input the value of x :");
        scanf("%d",&x);
        printf("Input number of terms : ");
        scanf("%d",&n);
        sum =x; m=-1;
        printf("The values of the series: \n");
        printf("%d\n",x);
   do
   {
      ctr = (2 * i + 1);
      mm = pow(x, ctr);
      nn = mm * m;
      printf("%d \n",nn);
      sum = sum + nn;
      m = m * (-1);
      i++;
          }while(i<n);
          printf("\nThe sum = %d\n",sum);
          return 0;
}
```

OUTPUT:

Input the value of x :2

Input number of terms : 3

The values of the series:

2

-8

32

The sum = 26