Assignment (11)

① write a function to calculate LCM of two number (TSRS)

```
#include <stdio.h>
int LCM(int x, int y);
int main()
{
   int a, b;
   Printf("Enter 2 Number = \n");
   Scanf("%d %d", &a, &b);
   Printf("LCM = %d", LCM(a,b));
   return 0;
}
int LCM(int x, int y);
{
   int i, j;
   for(i = x > y ? x : y; i <= x*y; i = i + (x>y ? x : y))
   {
      if(i % x == 0 && i % y == 0)
      {
         return i;
      }
   }
}
```

② write a program function to calculate the HCF of two number (TSRS)

```
#include (stdio.h)
int HCf (int x, int y);
Int main()
{
   int a, b;
   Printf("Enter two number \n");
   Scanf("%d%d", &a, &b);
   Printf("HCf is %d", HCf(a,b));
   return 0;
}
int HCf (int x, int y)
{
   int i, z = x > y ? x : x;
   for(i = z; i <= x > y ? x : y; i--)
   {
```

```
        {
          break;
        }
      }
      if(i==z-1)
        return 1;
      else
        return 1;
    }
```

③ write a function to check whether a given number is prime or not (TSRS)

```
#include<stdio.h>
  int PRIME(int x);
  int main()
  {
    int n, A;
    Prime("Enter a number=");
    scanf("%d", &n);
    A = PRIME(n);
    if(A==0)
      Printf("Not Prime");
    else
      Printf("Prime");
    return 0;
  }
    int PRIME(int x)
    {
      int i;
      for(i=2; i<x; i++)
      {
        if(x%i==0)
        {
          return 0;
        }
      }
    }
```

④ write a function to find the next prime number of a given numbers (TSRS)

```
#include<stdio.h>
int nextprime(int x);
int main()
{
    int n;
```

```
Printf("Enter a number=");
Scanf("%d", &n);
Printf("Next prime number is =%d", nextprime(n));
return 0;
}
int nextprime(int x)
{
  int i, j;
  For (i=x+1; i<i+1; i++)
  {
    For (j=2; j<i; j++)
    {
      if (i%j==0)
      {
        break;
      }
    }
    if (i==j)
      return i;
  }
}
```

⑤ write a function to print first N prime number (7SRS)

```
#include<stdio.h>
int firstNprime(int);
int main()
{
  int n;
  Printf("enter a number=");
  Scanf("%d", &n);
  firstNprime(n);
  return 0;
}
Void firstNprime(int x)
{
  int i, j, a=0;
  for (i=1; i<=i; i++)
  {
    for (j=2; j<i; j++)
    {
      if(i%j==0)
      {
        break
      }
```

```
    }
      if (i==j)
      {
       printf("%d ", i);
       a++;
       if(a==x)
         break;
      }
   }
}
```

⑥ write a function to print all prime number between two given number (TSRN)

```
#include<stdio.h>
int allprime(int x, int y);
int main()
{
  int a,b;
  Printf("Enter 2 number\n");
  Scanf("%d%d", &a, &b);
  All prime(a,b);
  return 0;
}
void allprime(int x, int y)
{ printf("prime number between %d and are \n", x,y);
  int i,j;
  for(i=x; i<=y; i++)
  {
   for(j=2; j<i; j++)
   { if (i%j==0)
     {
       break;
     }
   }
   if (j==i)
      printf("%d ", i);
  }
}
```

(7) write a function to print N terms of fibonacci series (TSRN)

```
#include<stdio.h>
int fibonacciseries(int x);
int main()
{
  int n;
  Printf("Enter a number=");
  Scanf("%d",&n);
  fibonacciseries(n);
  return 0;
}
  int fibonacciseries(int x)
  {
    int a=-1, b=1, c=0;
    Printf("%d terms of fibonacci series is =", x);
    while(x)
    {
      c=a+b;
      a=b;
      b=c;
      x--;
      printf("%d ", c);
    }
  }
```

(8) write a function to print PASCAL Triangle (TSRN)

```
#include<stdio.h>
int factorial(int);
int combination(int, int);
int Pascal_Triangle(int);
int main()
{
  int n, r;
  Printf("Enter number of Colours for pascal triangle=");
  scanf("%d", &n);
  factorial(n);
  Combination(n, r);
  Pascaltriangle(n);
  return0;
}
```

```
int factorial (int a)
{
  int b = 1;
  while (a)
  {
    b = b * a;
    a--;
  }
  return b;
}
int combination (int x, int y)
{
  return (factorial(x) / factorial (x-y) / factorial(y));
}
int Pascal_Triangle (int x)
{
  int i, j, k;
  for (i=1; i<=x; i++)
  {
    k=1;
    int r=0;
    for (j=1; j<=2*x-1; j++)
    {
      if (j>=x+1-i && j<=x-1+i && k)
      {
        printf("%2d", combination ((i-1), r));
        k=0;
        r++;
      }
      else
      {
        printf("  ");
        k=1;
      }
    }
    printf("\n");
  }
}
```

(9) write a program in c to find the square of any number using the function

```
#include<stdio.h>
int square (int n);
int main()
{
  int x;
  Printf("Enter a number=");
  Scanf ("%d", &x);
  Printf("Square of %d is = %d", x, square(x));
  return 0;
}
 int square (int n)
 {
   return n*n;
 }
```

(10) write a program in c to find the sum of the series 1!/1+2!/2+3!/3+4!/4+5!/5 using the function.

```
#Include<Stdio.h>
int fun(int n);
int add (int n);
int main()
{
  int x=5;
  fun(x);
  Printf("Sum is =%d", add(x));
  return 0;
}
 int add (int n)
 {
   int z=0;
   while (n)
   {
     z=z+fun(n)/n;
     n--;
   }
   return z;
}
 int fun(int z)
 {
   int a=1;
   while(n)
   {
     a=a*n;
     n--;
   }
 }
```