Labsheet-6 (Function)
ID: 021202076

1.

```
#include <stdio.h>
#include <stdlib.h>

int armstrong(int i);

int main()
{
   int i,sum=0;
   printf("The Armstrong numbers between 1 and 500 are: \n");
   for (i=1; i<=500; i++)
   {
      sum = armstrong(i);
      if (i==sum)
      {
         printf ("%d\n",i);
      }
   }
   return 0;
}

int armstrong(int i)
{
   int rem,sum=0;
   while(i)
   {
      rem = i%10;
      i /= 10;
      sum +=(rem*rem*rem);
   }
   return (sum);
}
```

2.

```
#include <stdio.h>
#include <stdlib.h>

int gcd(int a, int b);

int main()
{
```

```
    int x,y, GCD;
    printf("Please enter two number: ");
    scanf("%d%d",&x,&y);
    GCD = gcd(x,y);
    printf("Greatest common divisor (GCD): %d",GCD);
    return 0;
}

int gcd(int a, int b)
{
    if (a==0)
        {
            return (b);
        }
    if (b==0)
        {
            return (a);
        }


    if (a>b)
    {
        return gcd(a%b,b);
    }

    else
    {
        return gcd(a,b%a);
    }

}
```

3.

```
#include <stdio.h>
#include <stdlib.h>

int lcm(int x, int y);

int main()
{
    int x,y,LCM;
    printf("Please enter two value: ");
    scanf("%d%d",&x,&y);
```

```
    if (x<y)
    {
       LCM = lcm(x,y);
    }
    else
    {
       LCM= lcm(y,x);
    }
    printf("Lowest common multiple (LCM): %d",LCM);
    return 0;
}

int lcm(int x, int y)
{
    static int c=0;
    c += x;
    if ((c%x==0) && (c%y==0))
    {
       return (c);
    }
    else
    {
       return lcm(x,y);
    }
}
```

4.

```
#include <stdio.h>
#include <stdlib.h>

int fibonacci(int);

int main()
{
    int n,i,Fn;

    printf("Please enter fibonacci series number (value of n): ");
    scanf("%d", &n);
    printf("%dth number of fibonacci series is: ",n);
    for(i = 1; i <= n; i++)
    {
       Fn = fibonacci(i);
       printf("%d ", Fn);
    }
```

```
    return 0;
}

int fibonacci(int i)
{
    if(i == 1)
    {
        return(0);
    }

    else if(i == 2)
    {
        return(1);
    }

    else
    {
        return( fibonacci(i-1) + fibonacci(i-2) );
    }

}
```

5.

```
#include <stdio.h>
#include <stdlib.h>

int sumd(int n);

int main()
{
    int n,Sumd;
    printf("Please enter a positive number: ");
    scanf("%d",&n);

    Sumd = sumd(n);
    printf("The sum of digits for %d number: %d",n,Sumd);
    return 0;
}

int sumd(int n)
{
    int a,sum=0;
```

```
    if (n==0)
    {
       return (0);
    }
    else if (n>0)
    {
       a = n%10;
       n /=10;
       sum = a+ sumd(n);
    }
    return (sum);
}
```