Assignment-13 part-2 Solutions

Q-1

Ans

#include<stdio.h>

Int sum(int m);

Int main()

{

Int n,k;

Printf(“Enter a number\n”);

Scanf(“%d”,&n);

K=sum(n);

Printf(“ sum of first n natural numbers=%d”,k);

Return 0;

}

Int sum(int m )

{

If(m==1)

Return 1 ;

Return m+ sum(m-1);

}

Q-3

Ans

#include<stdio.h>

Int sumOdd(int n);

Int main()

{

Int k,num;

Printf(“Enter any number\n”);

Scanf(“%d”,&num);

K=sumOdd(num);

Printf(“ Sum of first odd natural numbers=%d”,k);

Return 0;

}

Int sumOdd(int n)

{

If(n==1)

Return 1;

Return (2\*n-1+sumOdd(n-1));

}

Q-4

Ans

#include<stdio.h>

Int square\_sum(int n);

Int main()

{

Int num,k;

Printf(“Enter any number\n”);

Scanf(“%d”,&num);

K=square\_sum(num);

Printf(“Square of sum of natural numbers=%d”,k);

Return 0;

}

Int square\_sum(int n)

{

If(n>=1)

Return 1;

Return n\*n+square\_sum(n-1);

}

Q-4(1)

Ans

#include<stdio.h>

Int square\_sum(int n);

Int main()

{

Int num,k;

Printf(“Enter any number\n”);

Scanf(“%d”,&num);

K=square\_sum(num);

Printf(“Square of sum of natural numbers=%d”,k);

Return 0;

}

Int square\_sum(int n)

{

If(n==1)

Return 1;

Return n\*n+square\_sum(n-1);

}

Q-5

Ans

#include<stdio.h>

Int sum\_digit(int n);

Int main()

{

Int num,k;

Printf(“Enter any number\n”);

Scanf(“%d”,&num);

K=sum\_digit(num);

Printf(“ sum of digit of a given numbers=%d”,k);

Return 0;

}

Int sum\_digit(int n)

{

If(n==1)

Return 1;

Return n+sum\_digit(n-1);

}

Q-6

Ans

#include<stdio.h>

Int fact(int n);

Int main()

{

Int num,k;

Printf(“Enter a number\n”);

Scanf(“%d”,&num);

K=fact(num);

Printf(“ Factorial of a given number=%d”,k);

Return 0;

}

Int fact( int n)

{

If(n==0||n==1)

Return 1;

Return n\*fact(n-1);

}

Q-7

Ans

#include<stdio.h>

Int fact(int n);

Int main()

{

Int num,k;

Printf(“Enter any number\n”);

Scanf(“%d”,&num);

K=fact(num);

Printf(“Factorial of a given number=%d”,k);

Return 0;

}

Int fact(int n)

{

If((n==0)||(n==1))

Return 1;

Return n\*fact(n-1);

}

Q-8

Ans

#include<stdio.h>

Int fib(int n);

Int main()

{

Int I,num;

Printf(“Enter how many terms you want to see\n”);

Scanf(“%d”,&num);

For(i=1;i<=num;i++)

Printf(“%d “,(fib(i)));

}

Int fib(int n)

{

If(n==1||n==2)

Return 1;

Return (fib(n-1)+fib(n-2));

}

Q-10

Ans

#include<stdio.h>

Int power( int,int);

Int main()

{

Int base,expo, result;

Printf(“Enter base value\n”);

Scanf(“%d”,&base);

Printf(“Enter Expinent/power\n”);

Scanf(“%d”,&expo);

Result=power(base, expo);

Printf(“ Calculated result=%d”, result);

Return 0;

}

Int power( int base,int expo)

{

If(expo==0)

Return 1;

Else

Return base\*power(base,expo-1);

}