Q.Evaluate the following:

1) 1 + 2 + 3 + 4 + 5 + ... + 10

Method:1 (Using for loop)

```
#include<stdio.h>

int main(){
   int sum = 0;
   for (int i = 1; i <= 10; i++){
      sum += i;
   }
   printf("The sum of 1+2+3+...+10 is %d", sum);
   return 0;
}
```

Method:2 (Using while loop)

```
#include<stdio.h>

int main(){
   int i = 1, sum = 0;
   while (i <= 10){
      sum += i;
      i++;
   }
   printf("The sum of 1+2+3+...+10 is %d", sum);

   return 0;
}
```

Method: 3 (Using do while loop)

```
#include<stdio.h>


int main(){
   int i = 1, sum = 0;
   do{
      sum += i;
      i++;
   } while(i <= 10);


   printf("The sum of 1+2+3...+10 is %d", sum);


   return 0;
}
```

2) 2 + 4 + 6 + 8 + 10 + ... upto n terms.

Method: 1 (Using for loop)

```
#include<stdio.h>

int main(){
   int num, sum = 0;

   printf("Enter the Nth term: ");
   scanf("%d", &num);

   for (int i = 1, j = 2; i <= num; i++){
      sum += j;
      j += 2;
   }
   printf("Sum of 2+4+6…+Nth term is %d\n",, sum);

   return 0;
}
```

Method: 2 (Using while loop)

```
#include<stdio.h>

int main(){
   int num,i = 1, j = 2, sum = 0;

   printf("Enter the Nth term: ");
   scanf("%d", &num);

   while (i <= num){
```

```
        sum += j;
        j += 2;
        i++;
    }

    printf("Sum of 2+4+6+...+Nth term is %d\n", sum);

    return 0;
}
```

Method: 3 (Using do while)

```
#include<stdio.h>

int main(){
    int num,i = 1, j = 2, sum = 0;

    printf("Enter the Nth term: ");
    scanf("%d", &num);

    do{
        sum += j;
        j += 2;
        i++;
    } while (i <= num);

    printf("Sum of 2+4+6+...+Nth term is %d\n", sum);

    return 0;
}
```

3) 1^2 + 3^2 + 5^2 + 7^2 + ... upto n terms .

Method: 1 (Using for loop)

```
#include<stdio.h>

int main(){
   int num, sum = 0;

   printf("Enter the Nth term: ");
   scanf("%d", &num);

   for (int i = 1, j = 1; i <= num; i++){
      sum += j * j;
      j += 2;
   }
   printf("The sum till %d terms is %d", num, sum);

   return 0;
}
```

Method:2 (Using while loop)

```
#include<stdio.h>

int main(){
   int i = 0,j = 1, sum =0, num;

   printf("Enter the nth term: ");
   scanf("%d", &num);
```

```
    while (i < num){
        sum += j * j;
        j += 2;
        i++;
    }
    printf("1^2 + 3^2 + 5^2 + 7^2 + ... upto nth terms is %d", sum);

    return 0;
}
```

Method: 3 (Using do while)

```
#include<stdio.h>

int main(){
    int i = 0,j = 1, sum =0, num;

    printf("Enter the nth term: ");
    scanf("%d", &num);

    do{
        sum += j * j;
        j += 2;
        i++;
    } while (i < num);
    printf("1^2 + 3^2 + 5^2 + 7^2 + ... upto nth terms is %d", sum);

    return 0;
}
```