Dept. of Computer Science and Engineering (CSE)

Class Test # 2 Year: **2023** Semester: **Spring**

Course: **CSE 1111** Title: **Structured Programming Language (Sec – A/V)**

Marks: **20** Time: **30 minutes**

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Name:…….. **ID:** ……

Q.1 ***(a) Re-write*** the following code segment using ***"Switch case"*** without changing the logical meaning: **[3]**

```
int a;
scanf("%d",&a);
if (a==5) printf("UIU\n");
else if(a==10) printf("CSE\n");
else if (a==15) printf("COMPUTER\n");
else printf("Bye\n");
printf("End");
```

Output Q1 (a)

```
int a;
scanf("%d",&a);
switch(a){
   case 5:
      printf("UIU\n");
      break;
   case 10:
      printf("CSE\n");
      break;
   case 15:
      printf("COMPUTER\n");
      break;
   default:
      printf("Bye\n");
      break;
}
printf("End");
```

(b) Find the **output** of the following code segment: **[3]**

```
int count = 1;
while (count <= 5) {
      puts((count % 2) ? "**" : "++++");
      count++;
   }
```

Output Q1 (b)

Q.2 ***Re-write*** the following code using "**while loop**" : **[3]**

```
#include<stdio.h>
int main(){
   for(int i=3; i>=1; i--){
         for (int j=1; j<=i; j++){
               printf("%d", 2*j+1);
         }
         printf("\n");
    }
}
```

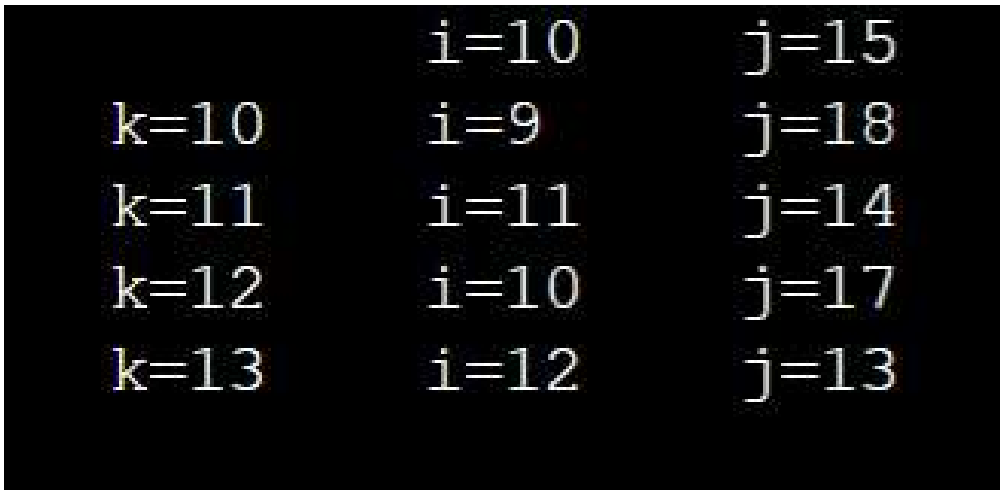
Output Q2

```
#include<stdio.h>
int main(){
   int i=3;
   while(i>=1){
      int j=1;
      while(j<=i){
         printf("%d", 2*j+1);
         j++;
      }
      printf("\n");
      i--;
   }
}
```

Q.3 ***Manually trace*** (show the values of all the variables in each step) the following code segment. **[5]**

```
i=10;
j=15;
printf("%d %d\n", i, j);
for (k=i;  k<=j;  k++){
        if (k%2==0){
            i - = 1;
            j + = 3;
        }
        else{

            i + = 2;
            j - = 4;
        }
        printf("%d %d\n", i, j);
}
```



Q. 4 Draw a ***Flow chart*** to find the **sum** of the following series up to n terms, where n is an input integer taken from keyboard. **[6]**

2 + 6 + 10 + 14 + 18 + ……. + n