

Lab 7

Conditional Statements (Cont.) And Iterations in C

Marks: 5

Question 01:

Write a program to check whether a given number is prime or not.

```
Enter a number to check: 19
19 is a Prime Number
```

Question 02:

Write a program that produce table of a user given number.

```
Enter a number to generate table: 5
5x1=1
5x2=10
5x3=15
5x4=20
5x5=25
5x6=30
5x7=35
5x8=40
5x9=45
5x10=50
```

Question 03:

Print the triangle pattern with asterisks and dots.

```
enter triangle size num
8
* * * * *
. * * * *
. . * * *
. . . * *
. . . . *
. . . . .
. . . . .
. . . . .
. . . . .
. . . . .
```

Question 04:

Correct the following:

- a. What's wrong with the following loop that is intended to compute the sum of the integers 1 through 100?

```
for (int i = 1; i <= N; i++) {
    int sum = 0;
    sum = sum + i;
} printf(sum);
```

- b. What does the following code print out?

```
int f = 0, g = 1;

for (int i = 0; i <= 15; i++) {

    Printf(f);
    f = f + g;
    g = f - g;
}
```

- c. Change/add one character so that the following program prints 20 xs. There are two different solutions.

```
int i = 0, n = 20;
for (i = 0; i < n; i--)
    printf("x");
```

- d. What is the value of m and n after execution?

```
int n = 123456789;
int m = 0;
while (n != 0) {
    m = (10 * m) + (n % 10);
    n = n / 10; }
```

- e. What does the following code fragment do?

```
int I, j;
for (int i = 0; i < N; i++)
    for (int j = 0; j < N; j++)
        if (i != j) printf(i , " , " , j);

for ( i = 0; i < N; i++)
    for (j = 0; (i != j) && (j < N); j++)
        printf(i " , " ,&j);
```

Question 05:

Write a program that accept a dialing code and return the corresponding country and city name.

```
Enter the dialing code: 92213
Country: Pakistan
City: Karachi
```