

CS0.101: Computer Programming (Section A)

Quiz 1 (Fall 2023)

Duration: 45 mins

✓ Question 1: (5 marks)

Write a program to find the factorial of a number. Here n can be taken to be an input from the user.

✓ Question 2: (5 marks)

What is type-casting? Explain the types of type casting in C.

✓ Question 3: (5 marks)

Write -35 in 2's complement form (assume 8-bit representation).

✓ Question 5: (4 marks)

State True/False with justification: Given two positive integers x and y , it is not possible to calculate the minimum and maximum of the two numbers without using any conditions or loops.

✓ Question 6: (10 marks)

Write a program to print the following pattern of the Pascal's triangle.

```
      1
     1 1
    1 2 1
   1 3 3 1
```

Question 6:

What is output of the following programs with proper justification ?

✓ 1. (5 marks)

```
#include<stdio.h>
int main()
{
    int x=5, y, z;
    y = x ++;
    z = x --;
    printf("%d %d %d\n", x, y, z);
    return 0;
}
```

2. (5 marks)

```
#include<stdio.h>
int main()
{
    int a = 3;
    a = (a++) + ~ (++a);
    printf("%d", a);
    return 0;
}
```

✓ 3. (5 marks)

```
#include<stdio.h>
int main()
{
    int i = 21 > 5 > 3 < 4;
    printf("%d", i);
    return 0;
}
```

✓ 4. (5 marks)

```
#include<stdio.h>
int main()
{
    int y;
    printf("%d", scanf("%d", &y));
    /* Suppose that input value given for above scanf is 2023 */
    return 0;
}
```