CS0.101: Computer Programming (Section B)
Quiz 1 (Fall 2023)
Duration: 45 mins

Question 1: (5 marks)

Write a program to find the sum of first n even numbers. Here n can be taken to be an input from the user.

Question 2: (5 marks)

Explain the control flow between the RAM, Hard disk and the CPU after a program is written.

Question 3: (5 marks)

Write -15 in 1's complement form (assume 8-bit representation).

Question 4: (5 marks)

State True/False with justification: Given two numbers x and y, the expression $y \wedge ((x \wedge y) \& - (x < y))$ calculates the minimum of the two numbers.

Question 5: (10 marks)

Write a program to print the following pattern.

```
        1
     2     3
   4    5    6
  7   8   9   10
```

Question 6:

What is output of the following programs with proper justification ?

1. (5 marks)

```c
#include<stdio.h>
int main()
{
int x=7, y, z;
y = - - x;
z = x + +;
printf("%d %d %d\n", x, y, z);
return 0;
}
```

2. (5 marks)

```c
#include<stdio.h>
int main()
{
int i;
for(i = 9; i!=0; i - -)
        printf("i= %d\n", i - -);
return 0;
}
```

3. (5 marks)

```c
#include<stdio.h>
int main()
{
int x = 4, y = 4, z = 4;
if (x == y == z)
{
        printf("YES");
}
else
{
        printf("NO");
}
return 0;
}
```

4. (5 marks)

```c
#include<stdio.h>
int main()
{
printf("%d", printf("Hello World"));
return 0;
}
```