**Question 1**

Find the time complexity of the following Pseudo Code ?

for( i = 1 ; i <= n ; i = i\*2)

for( j = 1 ; j <= i ; j++)

print(“Hello”)

**Answer 1**

Line 1 will run log n times. The time complexity becomes O(log n).

Line 2, the inner loop will run a max of i-1 times for each outer loop iteration. Time complexity is O(i-1) = O(i)

Line 3 is of constant complexity O(1).

Total time complexity is O(log n) \* O(i) \* O(1) = O(i log n)