Roll No. _____ Sec. _____

Computer Programming A, F
FAST-NU, Lahore, Spring 2018

Quiz 3

10 + 5 points.

(1) Write a function called partition which accepts an integer array A, its left and right bounds (indices), and a number p. The function 'partitions' the array A around the number p. For example, if A = {3, 1, 0, 7, 2, 10, -1, 9, 6, 2}, and left = 0 and right=9, and let's assume p = 4. Then after partition, A = {3, 1, 0, 2, -1, 2, 7, 10, 9, 6}. All numbers below or equal p are to the left of all numbers above p. The function should return the index of the last number in the left partition. For instance in this case it should return: 5 (the index of the second 2).

```
int partition(int A[], int left, int right){




}
```

(2) Describe in one line what the following code does.

```
void recursive(int A[], int left, int right){
  if(left<right){
      int p = A[right];
      int q = partition(A, left, right);
      recursive(A, left, q-1);
      recursive(A, q+1, right);
}}
```

What does it do?