CTR QUIZ

-------------------------------- ASWIN SUNDAR 2015103006 -------------------------------

-------------------------------- RAMKUMAR B 2015103042 ---------------------------------

# DATA STRUCTURES & ALGORITHMS QUIZ

1. Stack is used for

A - CPU Resource Allocation

B - Breadth First Traversal

C - Recursion

D - None of the above

Answer: C)

1. Minimum number of spanning tree in a connected graph is

A - n

B - nn - 1

C - 1

D – 0

Answer: C)

1. A pivot element to partition unsorted list is used in

A - Merge Sort

B - Quick Sort

C - Insertion Sort

D - Selection Sort

Answer: B)

1. A heap is a particular kind of a binary search tree. This statement is:

A - True

B - False

Answer: B)

1. Which of these is the time complexity involved in building a heap of n elements - and cannot be expressed in lower order terms?

A - O(n)

B - O(n log n)

C - O(n2)

D - O(n3)

F - O(log n)

Answer: A)

1. The Floyd-Warshall all-pairs shortest path algorithm for finding the shortest distances between nodes in a graph is an example of:

A - A Dynamic Programming formulation.

B - A Greedy Algorithm

C - A recursion based divide and conquer technique.

Answer: A)

1. Which of these is the Worst-case time complexity of Quick Sort - and cannot be expressed in lower order terms?

A - O(n)

B - O(n log n)

C - O(n2)

D - O(n3)

E - O(log n)

Answer: C)

1. The graph algorithm which forms an essential component of the 'make' or 'ant build' used by programmers and software developers is:

A - Flow maximization algorithm

B - Shortest path algorithm

C - Minimum spanning tree algorithm

D - Bipartite matching

E - Topological sort

Answer: E)

1. A union find data-structure is commonly applied while implementing:

A - A depth-first search traversal of a graph.

B - A breadth-first search traversal of a graph.

C - Computing the minimum spanning tree of a graph using the Kruskal algorithm.

D - Computing the all-pairs shortest path in a graph.

Answer: C)

1. Which of these is the average case time complexity of Merge Sort - and cannot be expressed in lower order terms ?

A - O(n)

B - O(n log n)

C - O(n2)

D - O(n3)

E - O(log n)

Answer: B)