**Solution Quiz # 3**

**Q1. Select the most suitable Cell/Cells for the following concepts. Apply in corresponding columns.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Description** | **A** | **B** | **C** |
|  | **Master’s theorem can be applied on** | T (n) = 2T (n/2) + 2n | T (n) = 2T (n/3) + sin(n) | **None of these** |
|  | **Complexity on solving this recurrence relation will be?** | O(n2.8) | O(n3) | **All of these** |
|  | **select the overall running time complexity of Kruskal's Algorithm** | O(n2) | **O(Elog V)** | O(n) |
|  | **A spanning tree of a graph is a sabgraph that is a tree and connects all \_\_\_\_\_\_\_\_\_\_ together.** | **Nodes** | Edges | Both |
|  | **Trees as special case of graph which can have self-loop.** | True | **False** | Can have loop but self-loop not allowed |
|  | **In tree, there could be only one path between 2 nodes.** | **True** | False | Indirect multiple path could exist. |
|  | **Kruskal's algorithm runs faster in sparse graphs than Prims algorithm** | **True** | False | Both are equal |
|  | **Selection Sort belongs to \_\_\_\_\_\_\_\_\_\_\_ approach.** | **Iterative Improvement** | Divide & Conquer | Brute Force |

**Q2. Design a minimum spanning tree using Prims algorithm.**

**Total Cost = 14**

