National University of Computer and Emerging Sciences, Lahore Campus

Course:	**Design and Analysis of Algorithms**	**Course Code:**	**CS302**
Program:	**BS(Computer Science)**	**Semester:**	**Spring 2018**
Duration:	**10 Minutes**	**Total Marks:**	**10**
Paper Date:	**26-April-18**	**Weight**	**3**
Section:	**E**	**Page(s):**	**1**
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Exam:	**Quiz 5(a)**	**Section:**	

Assume that G(V,E) is a weighted undirected graph where edge weights may not be distinct. Either proof or disproof the following statement.

Suppose each edge weight is increased by 1 in the graph G. The MST (set of tree edges) of changed graph would be same as the MST of the original graph.

If it is correct give the argument/justification or give a counter example if it is incorrect.

Yes as the relative order of the edge weights remain same so Kruskal Algorithm will select the same set of edges.