**Proof Questions ( Homework 10 assignments for chapter 10)**

**207 Chapter 10 “Graphs and Trees” Proof Questions**

**#1.**

Prove that having *n* vertices, where *n* is a positive integer, is an invariant for **graph isomorphism**.

**#2.**

Prove that the sum of the degrees of the vertices of any finite graph is even.

**#3.**

Show that every simple finite graph has two vertices of the same degree.