Name _____ Period _____

Freshmen Transition

Assignment 3S – Nuclear Decay 20 Points

Answer the following questions based on the in class notes

Define the role of the following subatomic particles		
Protons (p^+)	Electron (e^-)	Neutron (n^o)

Define *Z-Ratio*	How does Z-Ratio determine the stability of an isotope of an element?

What is the optimal Z-Ratio for the following size atoms?		
Small Atoms	Medium Atoms	Large Atoms

Calculate the Z-Ratio for the following isotopes of Carbon		
Carbon-12	Carbon-13	Carbon-14

What are the main components of all subatomic particles (e^-, p^+, *and* n^o)	When neutrons (n^o) break apart what does it produce?

Complete the following chart based on the main nuclear decay particles		
Alpha Particle	Beta + Particle	Beta - Particle
Overall Structure of the Particle		
How the nuclear decay particle makes the atom more stable		