

Name _____

Radiation Unveiled: The Mystery of Radioactive Decay

Multiple Choice Questions

1. What is the primary cause of radioactive decay in unstable nuclei?
 - A. Strong gravitational force
 - B. Weak nuclear force
 - C. Electromagnetic repulsion
 - D. Magnetic attraction

2. Which of the following types of radioactive decay involves the emission of an alpha particle?
 - A. Alpha decay
 - B. Beta decay
 - C. Gamma decay
 - D. Delta decay

3. What is the half-life of a radioactive isotope?
 - A. The time it takes for all radioactive atoms to decay
 - B. The time it takes for half of the radioactive atoms in a sample to decay
 - C. The time it takes for alpha particles to decay
 - D. The time it takes for gamma rays to decay

4. Why do some radioactive isotopes seem to age quickly?
 - A. Because they release energy in the form of heat
 - B. Because they are very small in size
 - C. Because their unstable nuclei are constantly seeking stability through decay
 - D. Because they are highly reactive with other elements

5. What is the primary force that binds protons and neutrons together in the nucleus of an atom?
 - A. Gravitational force
 - B. Magnetic force
 - C. Electromagnetic force
 - D. Strong nuclear force

