

Quiz on Nuclear Fission

1. Water and graphite are used in a nuclear reactor in order to _____.
 - a. keep the reactor cool
 - b. help release more neutrons
 - c. heat the reactor
 - d. slow down the neutrons
2. During the fission process, a Uranium-235 atom will _____.
 - a. absorb another neutron and become unstable
 - b. lose another neutron and become unstable
 - c. turn into another element
 - d. lose its electrons
3. Control rods are used to _____.
 - I. control the rate of fission
 - II. absorb neutrons
 - III. shut down the reactor
 - a. I only
 - b. I and II only
 - c. III only
 - d. I, II, and III
4. Which of these atoms are fissionable?
 - I. Uranium-238
 - II. Plutonium-239
 - III. Uranium-235
 - a. I only
 - b. I and III only
 - c. II and III only
 - d. I, II, and III
5. Which of the following is a way to control radiation in reactors?
 - a. Placing the waste in ceramic pallets encased in long metal rods.
 - b. Placing the waste inside a steel container encased in wood.
 - c. Placing the waste in a glass container with carbon dioxide.
 - d. Placing the waste into a polycarbonate case that is placed in a plastic bag.
6. Which of these is NOT a way to dispose of low-level waste?
 - a. Package it and sink it to the bottom of the ocean.
 - b. Package it and bury it.
 - c. Package it and burn it with chemicals.
 - d. Package it and place it in an uninhabited area.

7. What is NOT a method of decommissioning nuclear power plants?
 - a. dismantling
 - b. safe storage
 - c. entombment
 - d. imploding

8. What is the steam used for in a nuclear power plant?
 - a. It is used to turn the turbine.
 - b. It isn't used to do anything and is released as an excess gas.
 - c. It is condensed into water and re-used in the plant.
 - d. It is condensed and bottled as distilled water.

9. Under what conditions can small amounts of radioactivity be released into the environment?
 - a. Under no conditions is radioactivity released.
 - b. Only under controlled and monitored conditions is radioactivity released.
 - c. Radioactivity is released under any conditions.
 - d. Radioactivity is only released on rainy days because this neutralizes the atoms.

10. A fission chain reaction is when _____.
 - a. a neutron bounces off its intended atom and hits another
 - b. many neutrons are absorbed at a time
 - c. neutrons released by atoms are absorbed by other atoms
 - d. many nuclei are bombarded and split at exactly the same time