

M O D E R N E A R T H S C I E N C E

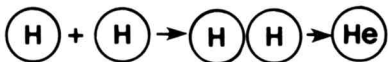
Section 11.3

Nuclear Energy

Read each statement below. If the statement is true, write *T* in the space provided. If the statement is false, write *F* in the space provided.

- _____ 1. Nuclear fuel produces radiation that is harmful to living cells.
- _____ 2. Uranium-238 is the radioactive isotope used for nuclear fission.
- _____ 3. Nuclear fusion is the combining of atomic nuclei.

Choose the one best response. Write the letter of that choice in the space provided.

- _____ 4. Which of the following is an important product of fission reactions?
- a. sound energy b. electrical energy
c. chemical energy d. heat energy
- _____ 5. In nuclear reactors, electricity is produced when the turbines of generators are turned by:
- a. neutrons. b. steam. c. protons. d. fuel pellets.
- _____ 6. Nuclear waste from commercial reactors is currently stored in:
- a. cement vaults. b. mountain caves.
c. on-site water pools or dry casks. d. coal mines.
- _____ 7. Which of the following reactions is represented by this diagram?
-  $\text{H} + \text{H} \rightarrow \text{H} + \text{H} \rightarrow \text{He}$
- a. decomposition b. carbonation
c. nuclear fission d. nuclear fusion
- _____ 8. Which of the following is a potential source of fuel for nuclear fusion reactions?
- a. water b. coal c. uranium d. petroleum
- _____ 9. One advantage of nuclear fusion over nuclear fission as an energy source is that nuclear fusion:
- a. is easily harnessed. b. produces less harmful waste.
c. requires no fuel. d. does not generate heat.
- _____ 10. Fission reactors are often cooled by circulating:
- a. air. b. oxygen. c. water. d. oil.