**NAME** _____

**Directions:** Circle the letter of the answer that best completes the statement given.

1. Energy released during fission is called nuclear energy because of the fissioning of the _____.

   a. proton
   b. neutron
   c. electron
   d. nucleus

2. Many universities and hospitals produce radioactive wastes that contain a small amount of radioactivity dispersed throughout a large amount of material. These wastes are considered to be:

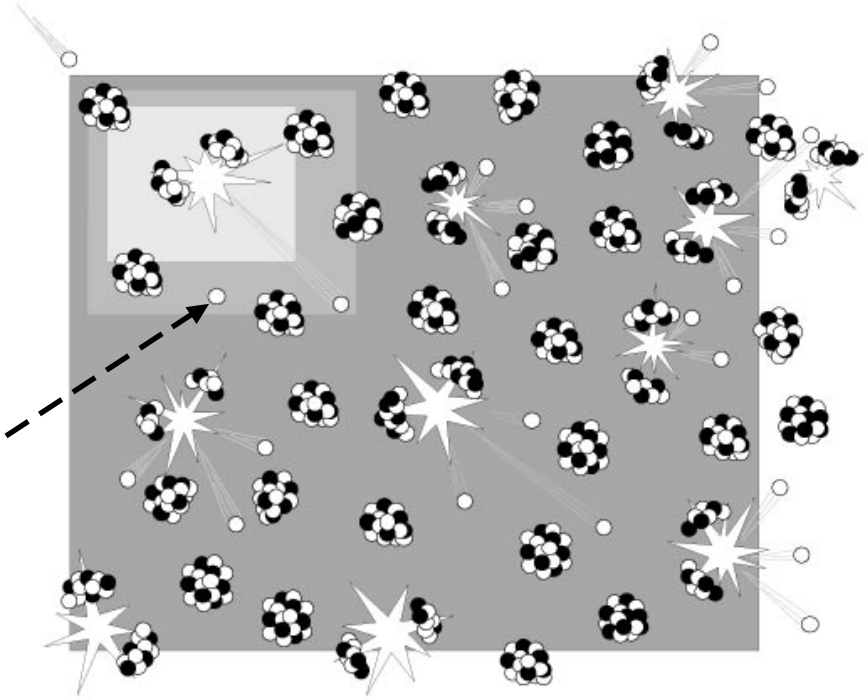
   a. low-level waste
   b. high-level waste
   c. transuranic waste
   d. mill tailings

3. Transuranic waste requires special disposal not because it is highly radioactive but because it:

   a. is composed of rocks and soils from mining and milling uranium ore
   b. contains materials that will quickly undergo radioactive decay
   c. contains materials that will require very long periods of time to undergo radioactive decay

4. Spent fuel and waste from defense activities that are usually highly radioactive and must be handled remotely are considered to be:

   a. low-level waste
   b. high-level waste
   c. transuranic waste
   d. mill tailings



5. In the United States, most fuel is currently stored in:

   a. a deep underground repository
   b. concrete casks at the reactor site
   c. deep pools of water at the reactor site
   d. shallow land burial sites

Use the diagram of the fission process above to answer questions 6 and 7.

6. The dashed arrow points to a _____, which begins the fission process. When present in significant numbers these keep the fission reaction going.

   a. transuranic
   b. uranium atom
   c. neutron
   d. fission product

7. The solid arrow points to a _____, which is produced during the fission process.

   a. transuranic
   b. uranium atom
   c. neutron
   d. fission product

8. By volume most nuclear waste is:

   a. high-level waste
   b. low-level waste
   c. transuranic waste
   d. uranium mill tailings

9. High-level waste includes:

   a. waste from industrial processes
   b. byproducts from nuclear medicine activities
   c. rocks and soil from mining and milling uranium
   d. spent fuel from nuclear powerplants

10. The percentage of electricity generated in the United States by nuclear powerplants is slightly more than:

    a. 50%
    b. 30%
    c. 20%
    d. 10%

11. According to the Low-Level Radioactive Waste Act of 1980, a compact is:

    a. an agreement between the United States and State governments
    b. a law regarding the disposal of high-level nuclear waste
    c. an organization of States that will dispose of the low-level waste of its members
    d. an organization of States that will dispose of the high-level waste of its members

12. Nuclear waste requires special disposal because it:

    a. is fluorescent
    b. is radioactive
    c. is a part of nature
    d. is decreasing in quantity

13. The agency responsible for establishing a system for the disposal of high-level radioactive waste is the:

    a. Nuclear Regulatory Commission (NRC)
    b. U.S. Department of Energy (DOE)
    c. Cabinet of the President of the United States
    d. Environmental Protection Agency (EPA)

14. The site that will be studied to see if it is suitable for a geologic repository is:

    a. Hanford, Washington
    b. Barnwell, South Carolina
    c. Oak Ridge, Tennessee
    d. Yucca Mountain, Nevada

15. The process during which neutrons strike the nuclei of uranium-235 atoms, are absorbed and split the nucleus is:

    a. fission
    b. radioactive decay
    c. fusion
    d. reprocessing

16. Transuranic waste will eventually be placed in:

    a. fuel rods
    b. a surface facility
    c. a cooling pond
    d. a geologic repository

17. Under provisions of the amended Low-Level Radioactive Waste Policy Act of 1980, beginning in 1993 each State will ship its low-level nuclear waste to:

    a. Federal facilities in South Carolina or Washington
    b. Yucca Mountain, Nevada
    c. an in-state or regional disposal facility
    d. cooling ponds at local nuclear powerplants

18. In the first 10 years of storage, spent fuel will have lost approximately 90% of its radioactivity due to:

    a. reprocessing
    b. radioactive decay
    c. fission
    d. fusion

19. Low-level waste from nuclear powerplants is currently disposed of at:

    a. a geologic repository
    b. a shallow land burial facility
    c. a spent fuel pool
    d. a cooling pond

20. Mill tailings are disposed of:

    a. at a geologic repository
    b. in casks at a shallow land burial facility
    c. by covering with soil
    d. a cooling pond