NAME _____ DATE _____ CLASS _____

CHAPTER REVIEW

Chapter 4

Structure of the Atom

I. Vocabulary Review

In the blank, write the word or words that best complete the sentence.

1. Becquerel's experiments with uranium gave evidence for the existence of _____.
2. The term used to describe any form of energy given off by an object is _____.
3. High-speed electrons given off by a radioactive substance are _____.
4. The most massive of the three types of radiation given off by a radioactive element is the _____.
5. The most penetrating of the three types of radiation given off by a radioactive element is the _____.
6. Chadwick named the _____.
7. Quarks make up _____ and neutrons.
8. The part of the atom that contains both protons and neutrons is the _____.
9. A radioactive gas that is produced from uranium and thorium is _____.
10. Radioactivity is a characteristic of elements with _____ atoms.

II. Concept Review

If the underscored word or phrase makes the sentence true, write "TRUE" in the space provided. If the underscored word or phrase makes the sentence false, write the correct term or phrase in the space provided.

_____ 11. The idea of the atom was first proposed by Dalton.

_____ 12. Uranium is an example of a radioactive element.

_____ 13. The type of radiation that can pass through lead shielding is alpha particles.

_____ 14. As you get farther from the nucleus, the energy level can hold more electrons.

_____ 15. Elements can be identified by the number of neutrons in the element's nucleus.

_____ 16. The heaviest form of radiation identified by Rutherford was the gamma ray.

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Chapter Review 4 (continued)

III. Skills/Process Review

Use Figure 1 to answer the following questions.

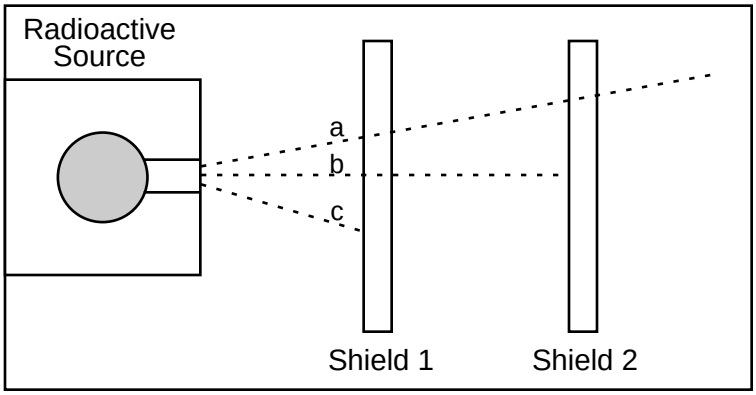

FIGURE 1

_____ **17.** If radiation **a** is beta particles, shield 2 could NOT be made of _____.
- **a.** a thick sheet of paper
- **b.** a 1-mm sheet of aluminum
- **c.** a thin sheet of paper
- **d.** a or b

_____ **18.** If radiation **b** is beta particles, shield 2 could be made of _____.
- **a.** a 1.5-cm sheet of lead
- **b.** a 1-mm sheet of aluminum
- **c.** a thick sheet of paper
- **d.** a or b

_____ **19.** If shield 2 is a 1-mm sheet of aluminum, radiation **c** could NOT be _____.
- **a.** alpha particles
- **b.** beta particles
- **c.** gamma rays
- **d.** uranium isotopes

IV. EYV Review

20. Leisure Connection: Your Nose Knows Explain why you could smell a chopped onion stored in a paper bag, but not one stored in plastic. _____

_____

_____

_____

_____