

Chapter 4 Practice Test

Introduction to Atoms

MULTIPLE CHOICE

Circle the letter of the best answer for each question.

- Which was one of Dalton's ideas?
 - All substances are made of atoms.
 - Atoms can be divided.
 - Atoms can be destroyed.
 - Most substances are made of atoms.
- What took place in the late 1880s?
 - Dalton created a new atomic theory.
 - Dalton disproved his theory.
 - Dalton's theory was proved.
 - Dalton's theory was changed.
- What is the meaning of atom?
 - "dividable"
 - "invisible"
 - "hard particles"
 - "not able to be divided"
- Which statement about atoms is true?
 - A penny has about 20,000 atoms.
 - Aluminum has large atoms.
 - A penny has more atoms than Earth has people.
 - Aluminum atoms have a diameter of about 3 cm.

Chapter Test C *continued*

MULTIPLE CHOICE

Circle the letter of the best answer for each question.

5. Which statement about isotopes is true?
 - a. They have the same number of protons.
 - b. They have the same number of neutrons.
 - c. They have a different atomic number.
 - d. They have the same mass.

6. According to Rutherford, what was in the center of an atom?
 - a. an electron
 - b. a nucleus
 - c. a particle
 - d. a proton

7. Which phrase describes radioactive isotopes?
 - a. They are stable.
 - b. They never change.
 - c. They are unstable.
 - d. They don't produce energy.

8. Which of the following has the least mass in an atom?
 - a. nucleus
 - b. proton
 - c. neutron
 - d. electron

Chapter Test C *continued*

MATCHING

Read the description. Then, draw a line from the dot next to each description to the matching word.

- | | | |
|--|---|---------------------|
| 9. positively charged particle | ● | a. electron |
| 10. negatively charged particle | ● | b. proton |
| 11. uncharged particle | ● | c. neutron |
| 12. sum of the protons and neutrons | ● | a. atomic mass unit |
| 13. mass of an atom expressed in atomic mass units | ● | b. atomic number |
| 14. unit that describes the mass of an atom | ● | c. mass number |
| 15. number of protons in the nucleus | ● | d. atomic mass |

Chapter Test C *continued***FILL-IN-THE BLANK**

Read the words in the box. Read the sentences. **Fill in each blank** with the word or phrase that best completes the sentence.

electrons	electron-cloud	protons
nucleus	atoms	isotopes

16. Thomson discovered the negatively charged particles called _____
17. Rutherford believed that each atom has a(n) _____ at its center.
18. The current atomic theory includes the _____ model.
19. All substances are made of _____.
20. Isotopes always have the same number of _____.
21. Most elements have a mixture of two or more _____.

strong	gravitational	electromagnetic
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22. Protons stay together in the nucleus because of _____ force.
23. Objects are pulled toward one another by _____ force.
24. Electrons around the nucleus are held in place by _____ force