

Name: _____

Period: _____

Date: _____

Quiz #1: Introduction to Atoms

1. What is an atom?
 - A. The most basic unit of an element.
 - B. A positively charged particle.
 - C. A negatively charged particle.
 - D. A particle with no mass.

2. What is located in the nucleus of an atom?
 - I. Protons
 - II. Neutrons
 - III. Electrons
 - A. I only
 - B. I and II
 - C. I, II, and III
 - D. I and III

3. Which of the following does the atomic number represent?
 - A. The mass of the atom.
 - B. The charge an atom has.
 - C. The number of protons in an atom.
 - D. The number of neutrons in an atom.

A.

4. What happens if an atom has a different amount of electrons than protons?
 - I. The particle is no longer an atom.
 - II. The particle has a charge.
 - III. The particle becomes a different element.
 - A. I only
 - B. I and II only
 - C. II only
 - D. I, II, and III

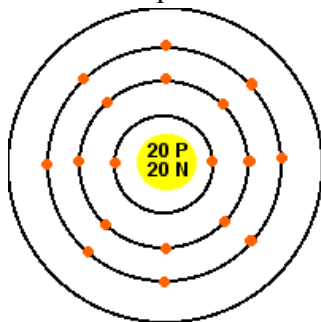
Find **Krypton** on your periodic table. Answer the following questions.

5. Number of protons: _____

6. Number of electrons: _____

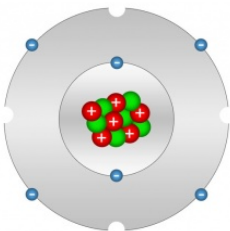
7. Number of neutrons: _____

8. Use the picture below to identify the following:



- A. An atom.
- B. A positive ion.
- C. A negative ion.
- D. A molecule.

9. Use the periodic table and the picture below to figure out what this is a picture of.



- A. An atom of carbon.
- B. An atom of magnesium.
- C. A carbon ion.
- D. An atom of nitrogen.

10. Which of the following is the smallest?

- A. Proton
- B. Neutron
- C. Electron
- D. Atom

11. Almost the entire mass of an atom is located in the...

- A. Nucleus
- B. Proton
- C. Neutron
- D. Electron

12. An atom has a mass number of 23 and an atom number of 11. The number of protons are.

- A. 11
- B. 12
- C. 23
- D. 44

13. The following scientist(s) is/are credited with coming up with the “plum pudding” model of the atom.

- A. Democritus
- B. Dalton
- C. J.J. Thompson
- D. Rutherford

14. The following scientist(s) is/are credited with using light/wavelength colors to examine the atom.

- A. Dalton
- B. Schrodinger and Heisenberg
- C. Bohr
- D. J.J. Thompson

15. Which of the following best explains what the “gold foil” experiment shows?

- A. Most alpha particles bounced back off the gold foil showing that the positive nucleus was small and in the center of the atom surrounded by electrons.
- B. Most alpha particles went through the gold foil showing that the positive nucleus was small and in the center of the atom surrounded by electrons.
- C. Most alpha particles went through the gold foil showing that the atom was made up of a lot of positive matter with a few electrons inside.
- D. The beams of electrons went through the gold foil showing that the atom was made up of a lot of negative matter with a few protons scattered around inside it.

16. Neils Bohr found that...

- A. Protons orbit the nucleus in specific energy levels.
- B. Electrons surround the nucleus but it is impossible to know exactly where they are at any one time.
- C. Electrons are negatively charged particles.
- D. Electrons orbit the nucleus in specific energy levels.

17. Why are models so important in science? (2 points)

- Explain what a model is.
- Use an example of a model used in science to help you explain their importance.

18. Draw an atom of **Chlorine** and label the following parts (2 points).

- Nucleus
- Protons
- Neutrons
- Electrons
- Charges for each subatomic particle

QUIZ SCORE: _____ / **22 POINTS**

PERCENTAGE: _____

LETTER GRADE: _____