

Big Chem: Unit 8 Atomic Theory

PRINT Name _____ Period _____

1. State the five steps of Dalton's Atomic Theory.
2. What did each of the following contribute in forming the atomic theory?
 - a. Dalton, b. Thomson, c. Rutherford, d. Chadwick, e. Avogadro, f. Franklin, g. Faraday, h. Crookes, i. Perrin, j. Millikan, k. Roentgen, l. Becquerel, m. Curie.
3. State the Law of Conservation of Mass and give an example.
Hint: $A = \text{the mass number} = \text{protons} + \text{neutrons}$. $Z = \text{the atomic number} = \text{the number of protons}$. Z also = the number of electrons in a neutral atom. The number of neutrons = $A - Z$.
4. A particular atom of argon contains 18 protons, 18 electrons, and 22 neutrons. What is the atomic number of this atom? What is its mass?
Ans: 18, 40g/mol.
5. What are the basic differences among protons, neutrons, and electrons?
6. How many electrons, neutrons, and protons are in the isotope of nitrogen with mass number 14?
Ans: 7 electrons, 7 protons, 7 neutrons.
7. State the Law of Definite Proportions and give an example.
8. State the Law of Gay Lussac and give an example (balance equation).
9. Why is the Induction Coil (Sparky) important in Chemistry.
10. List five properties of the Cathode Rays in the Crookes Tubes.
11. Describe an experiment to show that electrons have mass.
12. What is discovered in the Tube of Sir JJ Thompson?
13. What three things were measured in the Millikan Oil Drop Experiment?
14. Define *ion* and give two examples.
15. Define *isotope* and give an example.
16. What are two chemistry things we learn from *X-Rays*?
17. How was *Radioactivity* discovered?
18. What are the three particles of radioactivity?
19. List five properties of radioactivity.
20. How was *Fluorescence* discovered?

STAPLE THIS PAPER TO YOUR PAPERS (at home).
Turn in at the Beginning of the Period when due.