## Ch.Q1W2-Test

## **Multiple Choice**

Identify the choice that best completes the statement or answers the question.

1. The first subatomic particle discovered was the a. proton c. electron b. neutron d. nucleus 2. The scientific statement that says that compounds always have exactly the same composition by mass is the c. law of conservation of matter a. atomic theory b. matter hypothesis d. law of definite proportions 3. When a hypothesis is tested by many experiments, it becomes a(n) \_\_\_\_\_. a. scientific law c. theory b. revised hypothesis d. experimental fact 4. The only subatomic particle that does not carry an electric charge is the \_\_\_\_\_. a. proton c. electron b. neutron d. nucleus 5. The atomic number of an element whose atoms have 9 protons and 10 neutrons is c. 10 a. 9 b. 19 d. 18 6. The mass number of an element whose atoms have 12 protons and 13 neutrons is a. 12 c. 25 b. 13 d. 12.5 7. One isotope of carbon has 6 protons and 6 neutrons. The number of protons and neutrons of a second isotope of carbon would be . a. 7 and 6 c. 7 and 7 d. 6 and 6 b. 6 and 7 8. The correct way to arrange the three forms of electromagnetic radiation listed below, from highest to lowest frequency, is . a. ultraviolet > visible > infrared c. infrared > visible > ultraviolet b. visible > ultraviolet > infrared d. infrared > ultraviolet > visible \_\_\_\_\_ first proposed that matter is made up of atoms, the smallest particles of matter. 9. a. Democritus c. Proust b. Lavoisier d. Dalton 10. According to the law of conservation of matter, if 4.0 g of hydrogen react with chlorine to produce 146 g of hydrogen chloride, how many grams of chlorine reacted? a. 4.0 g c. 146 g b. 142 g d. 150 g 11. If 9.0 g of water contain 1.0 g of hydrogen, what mass of oxygen is contained in 36 g of water? a. 4.0 g c. 10.0 g b. 8.0 g d. 32 g 12. Which of the following statements is not a main point of Dalton's atomic theory? a. All matter is made up of atoms. b. Atoms are made up of smaller particles. c. Atoms are indestructible. d. All atoms of one element are exactly alike, but they are different from atoms of other elements.

	_ 13. J.J. Thomson used a cathode ray to discover the				
		a. atom	c.	proton	
		b. electron	d.	neutron	
	14.	14. If a scientist studies a beam of particles, and those particles are attracted to a negatively			
		particles are most likely			
		a. atoms	c.	protons	
		b. electrons	d.	neutrons	
	15.	5. What is a good comparison of the charge of an electron and the charge of a proton?			
		a. They are equal, but opposite.	c.	They are the same.	
		b. The charge of the electron is larger.	d.	The charge of the proton is larger.	
	16.	Iodine-131 and iodine-127 are examples of	<u> </u>		
		a. nuclei	c.	isotopes	
		b. isomers	d.	neutrons	
17. The discovery of isotopes led to the discovery of				·	
		a. atoms	c.	protons	
		b. electrons	d.	neutrons	
	18.	The experimentation of led to the theory	tha	t the atom is a sphere of mostly empty space, with a	
		positively charged nucleus with electrons around	nd it.		
		a. Bohr	c.	Rutherford	
		b. Nagaoka	d.	Thomson	
	19.	19. Which of the following are definitely in atoms of the same element?			
		a. 3 protons, 3 neutrons and 3 protons, 4 neut	rons		
		b. 3 protons, 3 neutrons and 4 protons, 4 neut	rons		
		c. 4 protons, 4 neutrons and 3 protons, 4 neut	rons		
		d. 3 protons, 4 neutrons and 4 protons, 3 neut	rons		
	20.	Atomic mass units are based on the mass of an	ator	n of	
		a. carbon-12	с.	oxygen-16	
		b. carbon-14	d.	nitrogen-14	
	21.	The is where the electron is most likely	to be	e found.	
		a. energy level	с.	electron cloud	
		b. electron orbit	d.	orbit	
	22.	The atomic number of chlorine is 17. How many valence electrons does an atom of chlorine have?			
		a. 2	с.	8	
		b. /	d.	1/	