## Test 1

1. Who is credited with the invention of the modern periodic table?

A. Nobel B. Mendel C. Mendeleev

**2.** The substances that are the result of a chemical reaction are called

A. Reactants. B. Products. C. Catalysts.

**3.** A substance that is used to speed up a chemical reaction but is not used as part of the reaction is called a

A. Reactant. B. Product. C.Catalyst.

4. After a chemical reaction, the properties of the products are

A. The same as the properties of the reactants.

B. Different than the properties of the reactants.

C.A combination of the properties of the reactants.

5. A bond where electrons are transferred is called a/an

A. Covalent bond. B. Ionic bond. C. Transfer bond

6. The part of the atom involved in chemical bonding is the

A. Nucleus. B. Valence electrons. C. Protons.

7. An atom is considered to be \_\_\_\_\_\_ when the number of protons and electrons are equal.

A. Positive B. Negative C.Neutral

8. A chemical reaction where energy is released is called

A. Endothermic. B. Exothermic.

9. A chemical reaction in which energy is absorbed is called

A. Endothermic. B. Exothermic.

**10.** A precipitate is a

A. Gas. B. Liquid. C. Solid substance.

**11.** A bond that occurs between metals and nonmetals is called a/an

A. Ionic bond. B. Covalent bond. C. Metal bond.

12. A bond that occurs between nonmetals and nonmetals is called a/an

A. Ionic bond. B. Covalent bond. C. Nonmetal bond.

**13.** A bond where electrons are shared is called a/an

A. Ionic bond. B. Covalent bond. C. Shared bond.

**14.** A glowing splint that relights in a test tube tests for this gas.

A. Nitrogen B. Hydrogen C. Oxygen

**15.** A lighted match put near a test tube that produces a popping sound tests for this gas.

A. Nitrogen B. Hydrogen C.Oxygen

**16.** In the chemical reaction between hydrochloric acid and calcium carbonate, which of the following elements cannot be part of the products?

A. Carbon (C) B. Nitrogen (N) C. Chlorine (Cl) D. Hydrogen (H) **17.** Which of the following is an example of a chemical reaction?

A. Tearing paper B. Evaporating water C.Baking a cake

**18.** Lithium, a highly reactive metal, is a member of the alkali metals. Use the periodic table to determine which element would have chemical properties that are similar to lithium.

A. Sodium B. Carbon C. Oxygen

**19.** Which element on the periodic table has physical properties MOST similar to the physical properties of chlorine?

A. Sodium B. Oxygen C. Florine

**20.** What type of metal the element of Lithium corresponds according to the periodic table of elements?

A. Alkali earth metal B. Transition metal C. Alkali metal

**21.** What is the test to distinguish between alkanes and alkenes?

A. Bromine water test

B. keep them near glowing splints

C. lime water test

22. What is addition polymerization?

A. It is the addition of one extra monomer

B. Polymerization is the process of joining many alkanes together to form a long chain of monomers.

C. Polymerization is the process of joining many alkenes together to form a long chain of monomers.

**23.** What are saturated bonds?

A. these are single covalent bonds

B. these are when no more substances can be dissolved in products of oil

C. these are double covalent bonds

**24.** What is the formula for alkenes?

	А.	CnH <sub>2</sub> n	B.	$CnH_2n_{+2}$	C. $C_2 n H_2 n$	
<b>25.</b> What is the formula for alkanes?						
	A.	CnH <sub>2</sub> n	В.	$CnH_{2}n_{+2}$	C. $C_2 n H_2 n$	
26.	Solid to	a liquid is				
	А.	Melting	В.	Freezing	C. Sublimation	
<b>27.</b> Liquid to a solid is						
	A.	Melting	В.	Freezing	C. Sublimation	
28.	Liquid	to a gas is				
	A.	Melting	B.	Vaporization	n C. Sublimation	
29.	Solid to	o a gas is				
	A.	Melting	В	. Vaporizatio	n C. Sublimation	
30.	Gas to a	a liquid is				
	A.	Condansation	В	. Vaporizatio	n C. Sublimation	
<b>31.</b> If an atom contains 11 protons and 12 neutrons, its atomic number will be:						
	A.	11	В	. 12	C. 23	
32.	2. A covalent bond is the result of:					
	A.	transferring elec	trons	B. transfer	ring protons C.sharing an electron	
<b>33.</b> If an atom gains an electron, it forms a:						
	A.	positively charg	ed ior	n B. negative	ly charged ion. C. covalent bond	
<b>34.</b> Which of the following is an example of a compound?						
	А.	water B. hydrog	gen ga	as C. chloride	eion	
<b>35.</b> An ionic bond occurs when one atom:						
	A.	shares an electro	n wit	h another atom		
	B. loses a proton and becomes positive					
	C. transfers an electron to another atom					
<b>36.</b> The cohesion of water is caused by:						
	A. i	onic bonds B.	cov	alent bonds	C. hydrogen bonds	
57. A substance that has a pH lower than 7 would be considered a:						
	A. 1	acıd B. base	C. 10	on		

**38.** A carbon atom has six protons but has 7 neutrons, this carbon atom would be called a(n):

A. acid B. base C. isotope

**39.** Water-based liquids can be described as acidic, neutral, or basic, with respect to pH. Which of these describes milk?

A. Slightly Acidic B. Milk does not have a pH C. Neutral **40.** What is the most common isotope of hydrogen?

A. protium B. deuterium C. tritium

**41.** What is the formula for alkynes?

A. CnH<sub>2</sub>n

B.  $CnH_2n_2$  C.  $C_2nH_2n$ 

**42.** What type of metal the element of Sodium corresponds according to the periodic table of elements?

A. Alkali earth metal B. Transition metal C. Alkali metal

**43.** Potassium, a highly reactive metal, is a member of the alkali metals. Use the periodic table to determine which element would have chemical properties that are similar to potassium.

A. Sodium B. Carbon C. Oxygen

**44.** What are  $\sigma$  bonds?

A. these are single covalent bonds

B. these are when no more substances can be dissolved in products of oil

C. these are double covalent bonds

**45.** What are  $\pi$  bonds?

A. these are single covalent bonds

B. these are when no more substances can be dissolved in products of oil

C. these are double covalent bonds

**46.** Which element on the periodic table has physical properties MOST similar to the physical properties of bromine?

A. Sodium B. Oxygen C. Chlorine

**47.** Who is credited with the invention of the modern periodic table?

A. Nobel B. Mendel C. Mendeleev

**48.** Which of these elements is a nonmetal?

A. Sodium B. Oxygen C. Potassium

49. A mole contains Avogadro's number of items. What is Avogadro's number?

A. 6023 B. 6.02x10<sup>23</sup> C. 6.023x10<sup>-23</sup>

**50.** Which of these elements is a metal?

A. Sodium B. Oxygen C. Sulfur