

1. When ionic compounds are named, the name of a monatomic anion will end in which of the following suffixes?

- A -ic
- B -ite #7
- C -ate
- D -ide #7

2. What is the name of the compound with the formula PCl_5 ? molecular

- A Phosphorus(I) chloride
- B Phosphorus(V) chlorine use prefixes
- C Phosphorus pentachlorate
- D Phosphorus pentachloride #9

3. Which of the following is the correct Lewis electron-dot diagram for the sodium atom?

- A $Na \cdot$ #3
- B $\cdot Na \cdot$
- C $:\ddot{Na}:$ valence e-
- D $:\ddot{Na}:$

4. How many electrons does the iron ion have when it forms the ionic compound $FeCl_3$?

- F 20
- G 23 #10 $FeCl_3$ neutral Fe 26 e- -3 = 23 e-
- H 26
- J 29

5. When an electric current is passed through water, the reaction shown takes place. If the arrow were pointing in the opposite direction, what type of reaction would the new reaction represent?

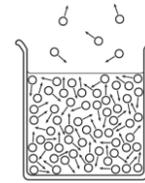
- A Single-replacement
 - B Double-replacement
 - C Synthesis #37
 - D Decomposition
- $2H_2O \rightarrow O_2 + 2H_2$
- $O_2 + 2H_2 \rightarrow 2H_2O$

6. Which of the following is a chemical change?

- F Salt is dissolved in water.
- G Water is boiled on a stove. #22
- H Gasoline combusts in an engine.
- J Copper metal is stretched into a long wire.

7. The diagram shows water molecules in an open beaker and water molecules that have evaporated into the air above the beaker. Which change in this system will increase the rate of evaporation? #16

- A Adding salt to the water
- B Increasing the temperature of the water #16
- C Increasing the pressure of the air above the water
- D Increasing the humidity of the air above the water



○ = Water molecule

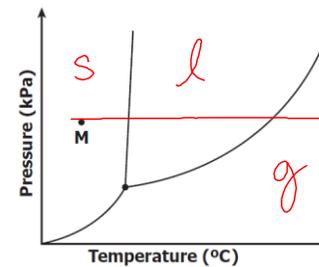
8. Based on its position in the periodic table, the element sulfur would be expected to have how many valence electrons?

- F 4
- G 6 #48
- H 8
- J 16

9. Which is the best use for a fume hood?

- A Storing glassware
- B Removing toxic vapors #34
- C Covering volatile compounds
- D Mixing chemicals that release O_2

Phase Diagram for Compound X



10. If the temperature changes from point M to point N, at constant pressure, compound X undergoes --

- F one phase change #46
- G two phase changes
- H three phase changes
- J no change in phase