

Chemistry 11 Substantial Assignment

Name: _____

Date: _____

1. The subatomic particle accounting for all the volume but virtually none of the mass of the atom is the
 - a. Neutron
 - b. Electron
 - c. Proton
 - d. Nucleus
2. For a given element in the periodic table, the number of electrons in the neutral atom and the positive charge on the atom's nucleus are represented by the atom's
 - a. Mass number
 - b. Atomic number minus mass number
 - c. Mass number minus atomic number
 - d. Atomic number
3. Atoms of each element are positively identified by their
 - a. Neutron number
 - b. Mass number
 - c. Atomic number
 - d. Valence electron number
4. Atoms in the same chemical family
 - a. Possess the same number of valence electrons
 - b. Are always at the same state at room temperature
 - c. Have valence electrons occupying the same energy level
 - d. Have similar-sized atoms
5. Which of the following elements will be presented by a Lewis diagram containing three unpaired electrons?
 - a. Sodium
 - b. Fluorine
 - c. Phosphorus
 - d. Sulfur

6. A Lewis diagram for an atom differs from a Bohr diagram because the
- Bohr diagram shows only the valence electrons and a Lewis diagram shows all the electrons
 - Lewis diagram shows only the valence electrons and a Bohr diagram shows all the electrons
 - Lewis diagram shows the nuclear contents and a Bohr diagram does not
 - Lewis diagram shows inner energy level electrons and a Bohr diagram does not
7. Which of the following can be correctly labelled as a covalent compound?
- PCl_3
 - CaCl_2
 - ClO_4^{1-}
 - Cl_2
8. Which of the following compounds would exist as a solid structure, known as a crystal lattice, at room temperature?
- F_2
 - CCl_4
 - NaBr
 - NH_3
9. Which of the following chemical formulas contains the greatest number of different elements?
- Sodium hydroxide
 - Iron(III)chloride
 - Tin(II)dichromate
 - Ammonium acetate
10. Which of the following compounds would require the use of parentheses (brackets) in its chemical formula?
- Ammonium chlorate
 - Iron(III)phosphate
 - Aluminum nitrate
 - Tin(II)dichromate

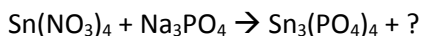
11. Which of the following compounds contains the greatest number of atoms?
- Lead(IV)acetate
 - Ammonium permanganate
 - Chromium(III)phosphate
 - Aluminum chlorate
12. The compound $\text{Sn}_3(\text{PO}_4)_2$ is correctly named as
- Tin(III)phosphate
 - Tin(IV)phosphate
 - Tri-tin tetra-phosphate
 - Tin(III)tetraphosphate
13. Which of the following chemical formulas contains the greatest number of oxygen atoms?
- Aluminum dichromate
 - Tin(IV)permanganate
 - Chromium(III)phosphate
 - Silver nitrate
14. In which of the following compounds will the bonding involve the sharing of electrons between atoms?
- Na_2O
 - N_2O_4
 - Nb_2O_3
 - NiO
15. The correct name for the compound P_4O_{10}
- Phosphorus(IV)decaoxide
 - Phosphorus oxide
 - Tetraphosphorus decaoxide
 - Diphosphorus pentoxide

16. Chlorine is added to a solution of sodium iodide, and a reaction occurs. The reactants are shown below.



- a. $2\text{ICl}_2 + 2\text{Na}$
- b. $2\text{NaCl} + \text{ICl}$
- c. $2\text{Na} + \text{I}_2 + \text{Cl}_2$
- d. $2\text{NaCl} + \text{I}_2$

17. Which of the following products would balance this reaction:



- a. 3NaNO_3
- b. 4NaNO_3
- c. 7NaNO_3
- d. 12NaNO_3

18. Which of the following elements is the least reactive?

- a. Na
- b. Nb
- c. Ne
- d. Ni

19. Which of the following elements is the most reactive?

- a. Rb
- b. Re
- c. Rh
- d. Ru

20. Which compounds below could represent the reactants in a neutralization reaction?

I.	NaOH
II.	H_3PO_4
III.	NaNO_3
IV.	H_2O

- a. I and II
- b. I and III
- c. II and III
- d. III and IV