

Name: _____

Practice Comp #2

Chem 6

1. Which of the following is a property of ionic compounds?
 - A. Lustrous (shiny)
 - B. High melting/boiling point
 - C. Malleable (can be dented)
 - D. Form molecules
2. Which of the following elements is a halogen?
 - A. Lithium (Li)
 - B. Magnesium (Mg)
 - C. Fluorine (F)
 - D. Neon (Ne)
3. An ion with 4 protons and 2 electrons has what charge?
 - A. +22
 - B. +2
 - C. -2
 - D. +12
4. Which of the following is the formula for potassium oxide?
 - A. KO_2
 - B. K_2O
 - C. KO
 - D. K_3O_2
5. What is the atomic number for boron?
 - A. 10.81
 - B. +3
 - C. 5
 - D. -5
6. What is the most common isotope of lithium?
 - A. Lithium-3
 - B. Lithium-7
 - C. Lithium-6.943
 - D. Lithium-4
7. What is the approximate molar mass of potassium oxide?
 - A. 55 g/mol
 - B. 71 g/mol
 - C. 94 g/mol
 - D. 114 g/mol

8. If a small amount of salt is placed into water and it dissolves, what have we created?

- A. A compound
- B. An element
- C. A homogeneous mixture (i.e. a solution)
- D. A heterogeneous mixture

9. Which of the following is sulfate?

- A. SO_4^{3-}
- B. SO_4
- C. SO_3^{2-}
- D. SO_4^{2-}

10. What is the correct name for FeCO_3 ?

- A. Iron carbon trioxide
- B. Iron (X) carbon oxide
- C. Iron (II) carbonate
- D. Iron (III) carbonate

11. What is the molar mass of $\text{Be}(\text{NO}_3)_2$?

- A. 39 g/mol
- B. 71 g/mol
- C. 119 g/mol
- D. 133 g/mol

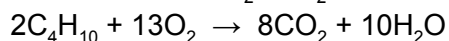
12. Seven moles of calcium (Ca) atoms is how many atoms?

- A. 240 Ca atoms
- B. 7 Ca atoms
- C. 6.02×10^{23} Ca atoms
- D. 4.2×10^{24} Ca atoms

13. One mole of $\text{Ca}_3(\text{PO}_4)_2$ contains how many **moles** of oxygen?

- A. Four
- B. Eight
- C. Three
- D. Sixteen

14. What is the molar ratio of CO_2 to O_2 in the following, balanced chemical formula?



- A. 13:8
- B. 8:13
- C. 1:1
- D. 26:16

15. Using the balanced formula from #15, how many moles CO₂ are created when 4 moles of O₂ are combusted?

- A. 16 moles CO₂
- B. 64 moles CO₂
- C. 2.5 moles CO₂
- D. 6.5 moles CO₂

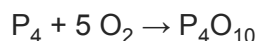
16. Where should a student look to determine the molar mass of an element or compound?

- A. Avogadro's number
- B. A balanced chemical formula
- C. A periodic table
- D. A student should memorize all molar masses

17. What would be the mass of 2.5 moles of calcium (Ca)?

- A. 40 grams
- B. 50 grams
- C. 80 grams
- D. 100 grams

18. The following formula represents what kind of chemical reaction?



- A. Synthesis
- B. Decomposition
- C. Combustion
- D. Single displacement

19. What is the chemical name for Na₂SO₄?

- A. Nitrogen sulfate
- B. Sodium sulfate
- C. Sodium (II) sulfate
- D. Sodium (III) sulfate

20. What are the coefficients in the following chemical formula when it is balanced?



- A. 1, 1, 1
- B. 9, 2, 1
- C. 5, 3, 2
- D. 1, 6, 4

21. What is the approximate molar mass of CaCO₃?

- A. 50 g/mol
- B. 100 g/mol
- C. 200 g/mol
- D. 250 g/mol

22. 980 milligrams is how many kilograms?

- A. 9.8×10^{-4} kg
- B. 9.8×10^{-5} kg
- C. 9.8×10^{-6} mg
- D. 9.8×10^{-7} mg

23. What is the approximate molar mass of O_2 ?

- A. 32 g/mol
- B. 16 g/mol
- C. 8 g/mol
- D. 1 g/mol

24. Which of the following elements can be found in the second period and third group (IIIA) of the main group elements?

- A. Boron (B)
- B. Magnesium (Mg)
- C. Nitrogen (N)
- D. Calcium (Ca)

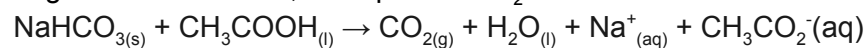
25. In metallic bonds

- A. Electrons are shared between atoms
- B. Positive nuclei are in a 'sea of electrons'
- C. Electrons are completely transferred from one atom to another
- D. Electrons do not move at all

26. Which of the following neutral elements has an electron configuration of $1s^2 2s^2 2p^6 3s^2$?

- A. Magnesium (Mg)
- B. Carbon (C)
- C. Sulfur (S)
- D. Argon (Ar)

27. In the following chemical formula, what phase is H_2O in?



- A. Solid
- B. Liquid
- C. Gas
- D. Aqueous

