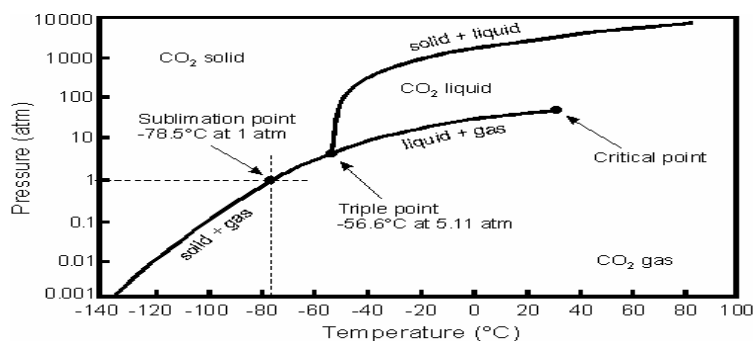


Chemistry Honors
General Chemistry Pre-Test

- Mark the best answer for each question or statement on the Scantron.
1. A small whole number that appears in front of a formula in a chemical equation is called a:
(a) subscript; (b) superscript; (c) ratio; (d) coefficient
 2. What is the ratio of chlorine to hydrochloric acid in the reaction
 $\text{H}_2(\text{g}) + \text{Cl}_2(\text{g}) \rightarrow 2\text{HCl}(\text{g})$: (a) 1:1; (b) 1:2; (c) 2:1; (d) 2:2
 3. If 5 atoms of magnesium are represented on the reactant side of a balanced chemical equation, the number of magnesium atoms on the product side must be:
(a) 0; (b) 5; (c) less than 5; (d) more than 5
 4. To balance a chemical equation, it is permissible to adjust the:
(a) coefficients; (b) subscripts; (c) formulas of the products; (d) number of products
 5. Which of the following has components that are obviously different?
(a) homogeneous mixture; (b) solution; (c) compound; (d) heterogeneous mixture.
 6. Compared to acids that have the suffix -ic, acids that have the suffix -ous contain:
(a) more hydrogen; (b) more oxygen; (c) less oxygen; (d) the same amount of oxygen.
 7. Whenever chemical reactions occur, matter is changed from one form into another. Which of the following **always** occur?
(a) there is a change in energy; (b) there is light produced;
(c) there is loss of matter; (d) there is a release of heat.
 8. When two or more kinds of matter retain their own characteristic properties within a sample, that sample is called:
(a) an alloy; (b) a compound; (c) a gas; (d) a mixture.
 9. A temperature of 100K will be: (a) a negative Celsius value; (b) greater than 0 degrees Celsius; (c) greater than 100 degrees Celsius; (d) between 0 degrees and 100 degrees Celsius.
 10. Substances which can not be further decomposed by ordinary chemical means are:
(a) compounds; (b) mixtures; (c) homogeneous; (d) elements.
 11. The phase of matter in which material has no definite shape but has a definite volume is:
(a) a liquid; (b) a gas; (c) a solid; (d) vapor.
 12. The average distance between the earth and the moon is 240, 000 miles. Expressed to two significant figures in correct scientific notation, this number is:
(a) 2.400×10^5 ; (b) 24×10^4 ; (c) 2.4×10^5 ; (d) 2.40×10^5
 13. To express the number 63,568,800 in scientific notation, you would move the decimal point to the left ___ times.
(a) 4; (b) 7; (c) 6; (d) 5
 14. Chemistry is: (a) a biological science; (b) a physical science; (c) concerned mostly with living things;
(d) the study of electricity.
 15. An equation that represents the relationship between the mass of a material, its volume and its density, is:
(a) $V=mD$; (b) $Vm=D$; (c) $DV=m$; (d) $D+V=m$
 16. The state of matter in which a material that can be easily compressed is:
(a) solid state; (b) liquid state; (c) gaseous state; (d) crystalline state.

34. The most common solvent used in solutions is
- alcohol
 - benzene
 - water
 - acetone
35. A substance in a chemical reaction that is completely used up is the
- limiting reactant
 - excess reactant
 - inhibitor
 - catalyst



36. From the phase diagram of CO₂, what is the minimum pressure required for carbon dioxide to exist as a liquid?
- 7400 kPa
 - 518 kPa
 - 120 kPa
 - 101 kPa
37. Weak forces that may hold molecules to each other are termed
- covalent bonds
 - van der Waals forces
 - colligative forces
 - ionic bonds
38. What is the name of the salt formed by the complete neutralization of sulfuric acid with magnesium hydroxide?
- magnesium sulfate
 - hydrogen sulfite
 - magnesium hydride
 - magnesium sulfide
39. Which of the following characterizes a strong acid?
- it is a ternary acid
 - it has the same number of hydrogen atoms as there are oxygen atoms
 - it ionizes completely into positive and negative ions
 - it has two or more hydrogen atoms per formula unit
40. Which of the following is the correct formula for hydrosulfuric acid?
- HS
 - H₂S
 - H₂SO₂
 - H₂SO₄