Q1 : Choose the correct answer for the following statements

1. The properties that can be determined or measured without changing the substance are called :

a. Chemical change	b. Physical change	c. Vital change	d. Geological change

2. What is the formula for density ?

a. mass / volume	b. mass + volume	c. mass × volume	c. mass × volume

3. The SI prefix milli and mega represent, respectively ?

a. 10^{-3} and 10^{3}	b. 10^{3} and 10^{6}	c. 10^{-3} and 10^{6}	d. 10^{3} and 10^{-3}

4. A convenient way to determine the volume of a solid (usually irregular-shaped) is called :

a. Titration	b. Displacement	c. Filtration	d. Distillation

5. What is the boiling point of water (100°C) in Fahrenheit ?

a. 112	b. 312	c. 212	d. 122

6 . is defined as the temperature at which the vapor pressure of a liquid becomes equal to the external pressure at the surface of the liquid

a. Melting point	b. Boiling point	c. Sublimation	d. Evaporation

7. Which is NOT a chemical change

a. Iron rusting	b. Methane combustion	c. Ice melting	d. Neutralization reaction

8. Which of the following is an extensive property ?

a. Mass	**b. Density**	**c. Color**	**d. Solubility**

9. When the distance travelled by the spot (D) = 3.5 cm and the distance travelled by the eluting or solvent front (F) = 7 cm, therefore RF = ….. ?

a. 0.1	**b. 0.5**	**c. 0.7**	**d. 1.0**

10. The unit for Rf value is :

a. cm	**b. g/L**	**c. mL**	**d. No unit**

11. What would the same or similar Rf values indicate ?

a. Same component	**b. Mixtures of components**	**c. Type of reaction**	**d. Solubility of component**

12. The process in which a solid changes from the solid to the gaseous state is :

a. Melting point	**b. Boiling point**	**c. Sublimation**	**d. Evaporation**

13. Find the percentage of Cl element in NH_4Cl if the mass of Cl = 2 g and NH_4Cl = 3 g

a. 66%	**b. 70%**	**c. 13%**	**d. 54%**

14. How many moles in 0.38 g of Cl? (Atw of Cl = 35)

a. 0.003	**b. 0.010**	**c. 0.110**	**d. 1.000**

15 . Take ΔH of 1.5 M NH_3 as –81.2 kJ/mol and ΔH of 1.5 M HCl as –165.1 kJ/mol, calculate the ΔH of NH_4Cl(s

a. –350.2	**b. 230.3**	**c. 246.3**	**d. –246.3**

16. If heat is absorbed during the reaction, ΔH is shown with positive sign and the reaction is called

a. Exothermic reaction	b. Enthalpy of formation	c. Endothermic reaction	d. Hess's Law

17. . $Na_2SO_4 + AlCl_3 \rightarrow NaCl + Al_2(SO_4)_3$ This equation is :

a. Molecular equation	b. Net ionic equation	c. Complete ionic equation	d. All is correct

18. If percent yield of Fe_2O_3 is (6.75 / 7.15) g × 100 = 94.4%. The (6.75) is the value of :

a. Theoretical yield	b. Experimental yield	c. Atomic mass	d. Enthalpy

19. Which of the following is the formula of a hydrated sample ?

a. Cu	b. SO_4	c. $CuSO_4$	d. $CuSO_4 \cdot 5H_2O$

20. Chromatography is a method of __ mixtures into its individual components

a. chemically separating	b. physically separating	c. (a & b) correct	d. all incorrect

21 . In gravimetric analysis the precipitate is separated from the remaining aqueous solution by ….

a. titration	b. filtration	c. evaporation	c. evaporation

22. A mobile phase or eluent can be-----.

a. liquid only	b. gas only	c. liquid or gas	d. solid

23. NaCl is ____ in water?

a. soluble	**b. insoluble**	**c. slightly soluble**	**d. all incorrect**

24. he reactant that gives the smaller moles of product is called ----- .

a. enthalpy	**b. number of moles**	**c. Hess's Law**	**d. limiting reactant**

25 The heat is measured experimentally by allowing the reaction to take place in a thermally insulated vessel called a __ .

a. distillation	**b. enthalpy of formation**	**c. calorimeter**	**d. exothermic reaction**

**** The questions are over****

King Khalid University

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Answer key

General Chemistry 1(1101Chem), Exam (10 Marks) , Academic year:(47) 1st term

Name: .....**University ID**.....

Section:.....

Q1/ Complete the following sentences: (2 marks)

(Solubility -Chromatography- Distillation- Sublimation - Boiling point- Evaporation)

1. Sublimation... the process which a solid change from the solid to the gaseous state.
2. Boiling point the temperature at which the vapor pressure of a liquid becomes equal to the pressure at the surface of the liquid.
3. Chromatography is a method of physically separating mixtures into its individual compone
4. Distillation...use to separate two components have different boiling points.

Q2/ Write (T) for true and (F) for false for the following statements: (4 marks)

1. Some properties, such as solubility, melting point and density are known as intensive properties. (✓)
2. Wash your hands after you leave the lab. (✓)
3. The unit for Rf value is cm. (✗)
4. The density of regular solid is reported in units of g/mL. (✗)
5. When the distance travelled by the spot (D) = 3.5 cm and the distance travelled by the eluting solution or Solvent Front (F) = 7 cm, therefore, Rf = 0.5. (✓)
6. The boiling point of water (100 °C) is equal to 212 Fahrenheit. (✓)
7. A stationary phase can be a solid or semi-solid. (✓)
8. Physical change that can be determined or measured without changing the composition or identity of the substances. (✓)

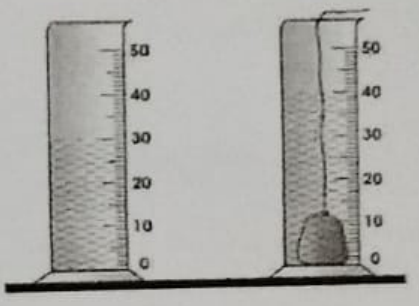
Q3/ Calculate the density of irregular solid object (figure below) if its mass= 80 g . (2 marks)

Note: When solving the question, be sure to write the law, substitution in the law, write the result, write the unit.

$D = M/V$ ½

$= 80 / 40-30$ ½

$= 8$ g/ml ½ ½



Q4/ Choose the correct answer for the following statements: (2 marks)

1- Which devices used to measure the temperature?

a) Galvanometer b) Odometer c) Potentiometer d) Thermometers

2- The SI prefix ***milli*** and ***mega*** represent, respectively

a) 10^{-3} and 10^{6} b) 10^{3} and 10^{9} c) 10^{-3} and 10^{3} d) 10^{-6} and 10^{3}

3- Liquid is measured in

a) Liter b) Kilometer c) Millimeter d) Centimeter

4- What is the formula for density?

a) mass / volume b) mass + volume c) mass **x** volume d) volume / mass

with best wishes for all success

Science of Chemistry

جامعة الملك خالد
KING KHALED UNIVERSITY

كلية العلوم
قسم الكيمياء

General Chemistry 1(1101Chem), Quiz 1 (10 Marks) . Academic year: 46 first term

Name: [redacted] University ID:.....

Section:.....

Write (T) for true and (F) for false for the following statements: (4 marks)

1- A mobile phase or eluent can be a solid or semi-solid (F)

2- The safety rules must be followed at all times in the laboratory. (T)

3- The unit for Rf value is cm (F)

4- Digital Balance are very sensitive instruments used for weighing substances (T)

5-When the distance travelled by the spot (D) = 3.5 cm and the distance travelled by the eluting solvent or Solvent Front (F) = 7 cm, therefore, Rf = 0.1 (F)

6-The boiling point of water (100 C) is equal to 312 Fahrenheit (F)

7-Chromatography can be used to determine the chemical composition of many substances (T)

8-Chemical change that can be determined or measured without changing the composition or identity of the substances (F)

Q2/ Mach the following: (4 marks)

1- Sublimination	3	The process which a liquid change to the gaseous state
2- Distillation	4	The extent to which a substance is soluble in a solvent
3- Solubility	2	the process which a solid change from the solid to the gaseous state
4- Evaporation	1	to separate two components have different boiling points

Q3/ Calculate the density of irregular solid object (figure below) if its mass= 90 g . (2 marks)

$$D = \frac{M}{V}$$

$$D = \frac{90}{10cm} = 90\ g/cm^3$$

with best wishes for all success