NEW ALWUROOD INTERNATIONAL SCHOOL, JEDDAH

HOLIDAY ASSIGNMENT 2018

STD: IX SUBJECT-CHEMISTRY

LESSON-1: Matter around us

I. ONE MARK QUESTIONS.

1. List any two properties of matter.
2. What temperature in Kelvin scale is equal to 50'c?
3. Write the full form of –
   a) C N G b) L P G
4. Define latent heat of fusion.
5. What are conditions for 'something' to be called 'matter'?
6. Which of the following diffuses fastest and which is the slowest- solid, liquid, gas.
7. Honey is more viscous than water. Can you suggest why?

II. **TWO MARKS QUESTIONS.**

1. Bromine particles are almost twice as heavy as chlorine particles .Which gas will diffuse faster bromine or chlorine? Explain your answer.
2. How can we change the physical state of a matter?
3. What is the physical state of water?
a) At 0*C b) at 25*C C) 11O*C d) 100*C
4. Explain why naphthalene balls kept in stored clothes in our home disappear over a period of time?
5. How does applying pressure help in the liquefaction of a gas?
6. How is ammonia gas liquefied?
7. Arrange the following in the increasing order of intermolecular attractive forces. Water, sugar, salt, alcohol, carbon dioxide.
8. Describe an experiment to show the particulate nature of matter.

9. Would you cool a bucket of water more quickly by placing it on ice or by placing ice in it? Give reason for your answer.

III. **THREE MARKS QUESTIONS.**

1. (a) How will you decrease intermolecular attractive forces between liquid molecules?
(b) What happens to the liquid when the intermolecular spaces in it areincreased?
2. Give reason for the following.
(a) Water at room temperature is a liquid.
(b) A gas exerts pressure on the walls of the container.
(c) Ice being denser than water floats on water.
3. For any substances, why does the temperature remain constant during the change of state?
4. Explain what happens to the molecular motion and energy of 1 kg of water at 273k when it is changed into ice at same temperature.
5. Draw a well labeled diagram showing sublimation of naphthalene.

IV. **FIVE MARKS QUESTIONS:**

1. (a) Define boiling point of a liquid.
(b) How does the boiling point of a liquid vary with pressure?
(c) What happens when we supply heat energy to water till it changes its state?
(d) What is this heat energy called?
2. When water is cooled to a temperature X*C, it gets converted into ice at this temperature by a process called P and when ice at temperature X*c is warmed, it gets reconverted into water at the same temperature in a process called Q.
(a) What is the value of temperature X in K?
(b) What is the process P known as?
(c) What is the name of energy released during process P?
(d) What is the process Q known as?
(e) What is the name of energy absorbed during process Q?
3. Draw the 'states of matter triangle' to show the inter conversion of states of matter.

LESSON-2: . Is matter around us is pure

I.ANSWER THE FOLLOWING:

1.State the condition for using the method of centrifugation to separate contents ofa mixture. State the principle involved in this process. (2 M)

2.Identify solute and solvent in the following solution :

(i) Aerated drinks (ii) lemon water (1M)

3. Identify solute and solvent in the following –

(a) Tincture of iodine (b) Aerated drinks (1M)

4.On dissolving chalk powder in water, a suspension is obtained. Give any fourreasons to support the fact that mixture so obtained is a suspension only. (2M)

5.When a solution is said to be saturated ? How can you change a saturated solution to an unsaturated solution without adding any more solvent to it ? Explain in brief. (2M)

6.If 25 mL of acetone is present in 150 mL of its aqueous solution. Calculate the concentration of solution. (2M)

7.State two ways by which you can distinguish a true solution from a colloidalsolution. Give one example of each. (2M)

8.Calculate the concentration of a solution which contains 25 g of salt dissolved in150 g of water. (2M)

9.Name and define one property by which ammonium chloride is separated from sodium chloride in a mixture of the two. Name one more substance that has this property. (2M)

10.Define concentration. If 4mL of acetone is present in 60 mL of its aqueous solution, calculate the concentration of this solution. (2M) 11.(a) List two differences and two similarities between colloids and suspension.

(b) Select the colloids from the following and also mention the type of colloid : coppersulphate solution, milk, solution of sugar and smoke. (3M)

12.Describe an activity with labelled diagram to obtain dye from blue ink. Name the component which gets evaporated. (3M)

13.Name the method that can be used for the separation of following mixturesstating the principle involved :

(a) Mixture of mustard oil and alcohol

(b) Mixture of red dye and water

(c) Butter from cream (3M)

14.(a) List any one difference between saturated and unsaturated solution.

(b) Write any two ways by which a saturated solution can be converted into an unsaturated solution.

(c) 20 g of sugar is dissolved in 100 mL of water.

Calculate the mass percentage of the solution. (3M)

15.With a neat labelled diagram explain the process used for separating two immiscible liquids. State the principle of this method. (3M)

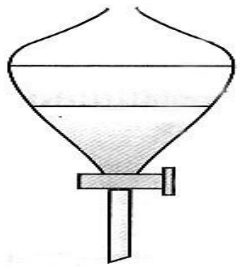
16. Define a solution? Give an example of a solution. Mention four properties of a solution.

How will you calculate the concentration in terms of

(i) Mass by volume percentage and

(ii) Mass by mass percentage of a solution? (4M)

17.An apparatus of a separation technique is given below



(a) Explain the above technique.

(b) Which principle is used in it?

(c) Complete the diagram with proper labeling (any two)

(d) Give its two applications. (4M)