DELHI PUBLIC SCHOOL, DURGAPUR

QUESTION BANK & REVISION SHEET FOR PA-II (2018-19)

CLASS- IX

SUBJECT: CHEMISTRY

CHAPTER 1

Q1.Convert 300K into Celsius scale and -10 degree C into Kelvin scale

Q2. Why does the smell of hot cooked food reach you several meters away within seconds ?

Q3. List properties of particles of matter.

Q4. What is dry ice?What happens when the pressure under which it is stored is decreased to 1atmosphere?

Q5.Sponge is solid still it can be compressed why?

Q6. Why is ice at 273 K more effective in cooling than water at the same temperature?

Q7. Why do liquids flow?

Q8. Why do gases exert pressure?

Q9. Why does temperature remain constant while there is change of state?

Q10. What is the meaning of volatile liquids ? Give example.

Q11. Why does a desert cooler cools better on a hot dry day?

Q12. Why are we able to sip hot tea or milk faster from a saucer rather than a cup?

Q13. How are gases liquefied?

Q14. Give two reasons to justify that water is liquid at room temperature.

Q15. Evaporation causes cooling .justify

Q16. Melting point of three substances A,Band C are 52°C ,175°C and 80 °C .Arrange them in the decreasing order of the interparticle force of attraction in each of them .Give reason for your answer.How does the presence of impurities affect the boiling point and freezing point of a substance ?

Q17. Latent heat of evaporation of two liquids A and B is 100 j/kg and 150 j /kg respectively ,Which one can produce more cooling effect and why ?

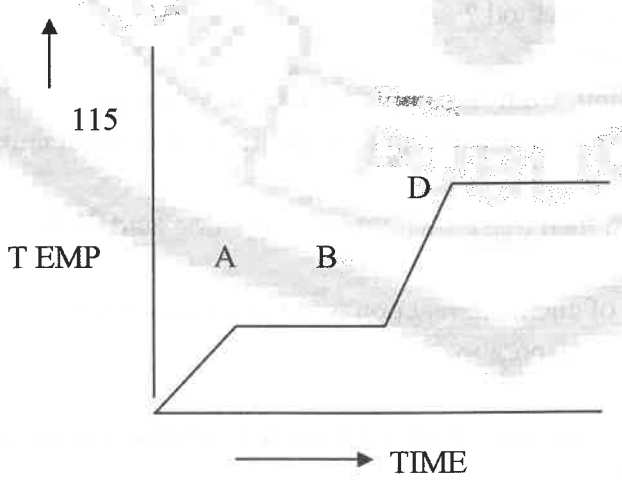
Q18. Draw a labeled diagram to show sublimation of camphor.

Q19. Describe by an experiment the rate of diffusion and density of liquids.

Q20.List differences between evaporation and boiling .State factors which influence rate of evaporation.

Q21. Solid carbondioxide is also known as dry ice why?

Q22. The temperature time graph given below shows the heating curve for pure wax .From the graph answer the following :



a) What is the physical state of the substance at the points A,B ,C and D ?

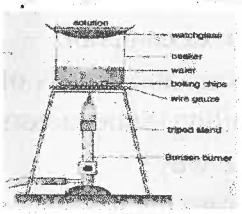
b) What is the melting point of the substance ?

c) Conversion of solid state to liquid is called fusion .What is known as latent heat of fusion ?

d) Why does the temperature of a substance remain constant during its melting point or boiling point ?

IS MATTER AROUND US PURE

Q1.Identify the separation technique used :
a.) To separate the components of ink.b) To separate cream from milk c). To separate alcohol from water. d) To separate mustard oil from water.e.)Different gases from air f.) Camphor and sand g.) Dyes in blue black ink.
Q2. State two reasons to justify that air is mixture and water is compound.
Q3..Solubility of potassium nitrate at 313 k is 62 g .What mass of potassium nitrate would be needed to produce a saturated solution of KNO3 in 50 g of water at 313K? What is the effect of change of temperature on the solubility of a salt?
Q4. What mass of water must be added to 5g of NaCl to make 5% mass by mass percentage of the solution ?
Q5.. A child eats chocolate and digest it .In doing so some physical and chemical changes take place .Identiy the changes.
Q6. You have a saturated solution at 353 K. State what would happen to its concentration when
a. solvent is added to it . b. solute isd added to it. c. it is heated d. it is cooled.
Q7. Name the process for separating the component of a mixture containing sand salt and ammonium chloride .
Q8. Name the principle used to separate kerosene from water .Draw a well labeled diagram of it.
Q9.How would you separate dyes in blue ;black ink using chromatography.
Q10. Give the names of the elements present in the following compounds :
a. Quick lime b. Hydrogen bromide c. Baking powder d. Potassium sulphate
Q11. 10 ml of H_2SO_4 is dissolved in 90 ml of water .Calculate mass by volume percentage of te solution .
Q12.Study the diagram shown below and answer the following qs:

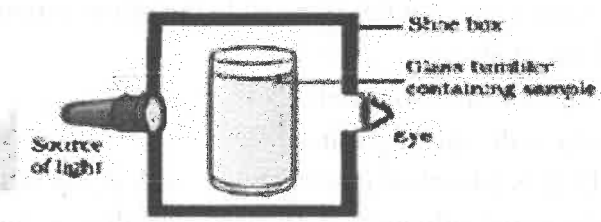


a. Name and define the process .
b. which type of substances can be separated by this method ?
C. What can we interpret about the nature of the ink?
Q. Describe an activity to separate the crystal of alum from its sample .Name the technique.
Q 13. 7g of iron filings and 4g of sulphur powder is treated with dilute sulphuric acid at room temperature .Name the gas produced .
b. The same mixture is heated strongly ,cooled and then treated with dilute sulphuric acid .Which gas would be produced?
c. What is the cause of this difference in products of chemical reaction in different conditions?
Q 14.Why is crystallization technique is better than evaporation ?
b. Why is a fractionating column with beads ?
Q.15. 20g of sodium chloride is dissolved in 100 ml of water .How will you test whether the given solution is saturated or unsaturated at the given temperature ?
b. Suggest any one method by which we can increase the solubility of saturated solutions ?
Q16. Calculate the mass of potassium sulphate required to prepare its 10 % solution in 100 g of water .
Q 17.What volume of ethyle alcohol and water must be mixed together to prepare 250 ml of 60 % volume by volume solution of alcohol in water.

Q 18.You are given two samples of water as A and B .Sample A boils at 100 °C and sample B boils at 102°C .Which sample of water will not freeze at 0 °C?

Q19. Sucrose crystals obtained from sugarcane and beet root are mixed together Will it be a pure substance ?give reasons .

Q20. A group of students took an old shoe box and covered it with a black paper from all sides .they fixed a torch at one end of the box and made another hole on the other side to view the light .They placed a milk sample in a beaker in the box as shown .They were amazed to see that milk taken in the tumbler was illuminated .They tried the same by taking salt solution but nothing could be seen this time



a. Explain why the milk sample was illuminated ? Name the phenomenon .

b. Same result was not given by salt solution ,Why?

c. Can you suggest two more solutions which would show same effect ?

Q21. India is still using cfcs in refrigerators and airconditioners but USA has banned cfcs .Ozone is an allotrope of oxygen .Ozone layer protects us from uv radiations which may cause sun burns ,skin cancer and it also destroys greenery .Ozone depletion is caused by emission of cfcs .

i) should we ban use of cfcs ? give reason

ii) What is atomicity of ozone ?

iii) What values are possessed by USA where cfcs ae banned?

Q22. How will you separate following components from a mixture :

a. iron filings ,ammonium chloride and sand mixture

b. common salt and chalk

c. sand water and mustard oil

d. sulphur,commonsalt and sand

e. charcoal ,sulphur and nitre (KNO3)(GUNPOWDER)

Q23. What kind of mixtures are separated by crystallization?

Q24. To make a saturated 36 g of sodium chloride is dissolved in 100g of water at 293 k .calculate concentration of the solution .

PRACTICALS

1.To prepare colloidal solution of starch one should :-

a. add starch powder to boiling water and cool b. add starch powder to cold water and then boil it

c. heat starch powder add it to cold water and then boil d. add a thin paste of starch to boiling water with stirring

Q2. Which of the following do not form a true solution

a. salt b. sugar c. alum d. soap

Q3.. When a mixture of iron filings and sulphur powder was prepared, it was observed that the colour of iron filings is :

a. grayish b. reddish c. yellow d. green

Q4. A student by mistake mixed iron filing and sulphur powder. He wanted to separate them from each other. The method you would advise him to use is to dissolve the mixture in :

a. boiling water b. cold water c. carbon disulphide d. kerosene

Q5. In an experiment to determine the melting point of ice in laboratory, what form of ice should be preferably used? When should the reading of thermometer be noted?

Q6. Four students were asked to observe the effect of heat on Iron sulphide. The teacher provided them with test tubes, holders and solid Iron sulphide. The students then started heating iron sulphide as shown below. The teacher stopped three of them for using wrong procedures.

The correct way of heating is shown in setup : (a) I (b) II (c) III (d) IV

Q7. A colourless gas was evolved when zinc granules were added to dilute sulphuric acid. Which of the following are the characteristics of gas evolved ?

a. It is a pungent smelling gas that burns with a pop sound.

b. It is a reddish brown gas that burns with cracking sound.

c. It is a supporter of combustion. D. It is odourless gas that burns with a pop sound.

Q8.On heating a mixture of Iron filings and sulphur powder in a china dish, colour of residue formed is :(a) grey (b) yellow (c) black (d) reddish

Q9. When carbon disulphide is added to a mixture of iron filings and sulphur powder taken in a boiling tube.Which one of the following is not observed ?

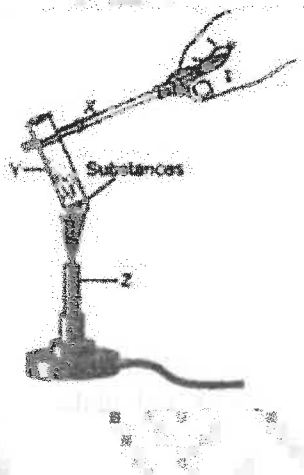
(a) Iron filings remain unaffected.

(b) Sulphide powder dissolved and yellow solution is formed.

(c) Iron sulphide, a black coloured mass is formed by combination of Iron and sulphur.

(d) Yellow sulphur reappears when yellow solution is evaporated

Q10.In the following picture identify X,Y,Z



a. Test tube , burner , Test tube holder

b. Test tube holder, burner , test tube

c. test tube holder, test tube , burner

d. test tube test tube holder, burner

SYLLABUS FOR THE PA-II

CHAPTER 1. MATTER IN OUR SURROUNDINGS

CHAPTER 2- IS MATTER AROUND US PURE ?