KV CTPP CHHABRA

WINTER BREAK HOLIDAY’S ASSIGNMENT: 2023-24

CLASS-IX Subject –Chemistry

Q1.Ram Singh tested the solubility of four different substances at different temperatures and collected the data as given below.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| S.NO | Salt Dissolved | Temperature in K | | | | |
| 283 | 293 | 313 | 333 | 353 |
| 1. | Sodium Sulphate | 22 | 30 | 58 | 98 | 158 |
| 2. | Calcium Carbonate | 20 | 29 | 55 | 90 | 148 |
| 3. | Zinc Nitrate | 25 | 31 | 57 | 96 | 151 |
| 4. | Ammonium Chloride | 19 | 25 | 56 | 93 | 150 |

(Results are given in the following table, as grams of substance dissolved in 100 grams of water to form a saturated solution).

(a)What mass of Ammonium Chloride would be needed to produce a saturated solution of Ammonium Chloride in

25 grams of water at 298 K?

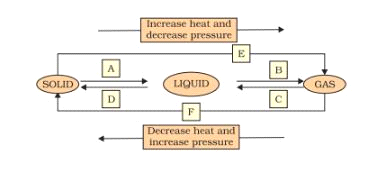
(b)Ram Singh makes a saturated solution of Zinc nitrate in water at 353 K and leaves the solution to cool at 293K temperature.

What would she observe as the solution cools? Explain.

( c)Find the solubility of each salt at 313 K. Which salt has the highest solubility at this temperature?

(d)What is the effect of change of Pressure on the solubility of a salt? (e)What is the effect of change of Temperature on the solubility of a salt?

Q2. Name A, B, C, D, E and F in the following diagram showing change in its state?



Q3.What produces more severe burns, boiling water or steam?

Q4.Classify the following into elements, compounds and mixture.

(Milk,Mercury,Acetic Acid,Starch Solution,Ice,Brick,Gold)

Q5.Draw the tablet diagram of Sublimation process.

Q6. Define the following: (a)Latent heat of vaporisation (b)Boiling point.(c)Condensation process

Q7. Which separation techniques will you apply for the separation of the following?

(a) Sugar from its solution in water.

(b) Ammonium chloride from a mixture containing sodium chloride and ammonium chloride.

(c) Small pieces of metal in the engine oil of a car.

(d) Different pigments from an extract of flower petals.

(e) Butter from curd.

(f) Oil from water.

(g) Tea leaves from tea.

(h) Iron pins from sand.

(i) Wheat grains from husk.

(j) Fine mud particles suspended in water.

Q8.Explain the following with suitable example.

(a) Heterogeneous mixture

(b)Saturated Solution

(c ) Colloids

(d)Tyndall Effect

Q9.What is the dispersed phase and dispersion medium of Milk of Magnesia?

Q10.Give three examples of Physical and Chemical Changes which is not present in this text book.