Chemistry - 11th Class Chemistry Short Questions Chapter 9 Preparation

Q1. What is upper consulate temperature and give one example?

Ans 1: The temperature of 65.9°C at which two conjugate solutions merge into one another is called critical solution temperature or upper consulate temperature .For Example 34% phenol and 66% water solution.

Q2. Define solubility curve.Name its two types?

Ans 1: Solubility Curve: A graphical representation between temperature and solubility of a substance is called solubility curve.These are of two types:

1. Continuous solubility curve
2. Discontinuous solubility cure

Q3. The total volume of the solution by mixing 100 cm^3 Of water 100 cm^3 Of alcohol may not be equal to 200 cm^3 Justify it?

Ans 1: Alcohol and water are mix in all proportions.However, the properties of such solutions are not strictly additive.Generally, the volume decreases ,mixing but in some cases it increases.Heat may be evolved or absorbed during the formation of such solutions.

Q4. Define molal freezing point constant giving example.

Ans 1: It is depression of freezing point, when one mole of non-volatile and non-electrolyte solute is dissolved in one kg of solvent.

Q5. Define consulate solution temperature with example (what is consulate temperature)?

Ans 1: Consulate Temperature: The temperature at which two conjugate solutions merge into each other to form homogeneous mixture is called critical solution temperature or consulate temperature.e.g Water -Aniline has consulate temperature 167°C with 15% H_2O.

Q6. Differentiate between ideals and non-ideal solutions?

Ans 1: Ideal Solution:

1. The solutions which obey Raoult's law are called ideal solution
2. In these solution, enthalpy change is zero.

Ans 2: Non-Ideal Solution:

1. The solutions which do not obey Raoult's law are called non-ideal solution

2. In theses solutions, enthalpy change is not zero.

Q7. Give the condition of colligative properties?

Ans 1: There are following conditions for colligative properties:

1. Solution must be dilute.
2. Solute must be non-volatile.
3. Solute must be non-electrolyte.

Q8. Why is the vapour pressure of a solution less than pure solvent?

Ans 1: In pure solvent all the surface of solvent is covered by solvent molecules.But when a solute is added to it from a solution.Some surface is occupied by solute particles. Hence escaping tendency of solvent is decreases and thus vapour pressure of solution also lowered.

Q9.

Ans 1:

Q10. Differentiate between continuous and discontinuous solubility curves?

Ans 1: Continuous Solubility Curve: These are smooth curves and do not show any sharp break points.(Continuous increase or decreases in solubility with temperature.e.g.Solubility curves of $KClO_3$,$K_2Cr_2O_7$ Etc.

Discontinuous Solubility Curves: These are not smooth and shows sudden breaks due to sudden changes in solubilities.e.g.Solubility curves of Na_2SO_4,$CaCl_2$ etc.
