REVISION TEST :-4   CLASS – XII   [Chemistry]   CHAPTER – SOLUTION

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MAXIMUM MARKS =33

Q.1 Which one of the following is incorrect for ideal solution? [1]
(a) $\Delta H_{mix} = 0$
(b) $\Delta U_{mix} = o$
(c) $\Delta P = P_{Observed} - P_{Calculated\ by\ raoults\ law} = 0$
(d) $\Delta G_{mix} = 0$

Q.2 Two liquids X and Y on mixing gives a warm solution. The solution is …………..[1]
(a) ideal
(b) non-ideal and shows positive deviation from Raoults law
(c) ideal and shows negative deviation from Raoults Law
(d) non – ideal and shows negative deviation from Raoults Law

Q.3 Assertion : An ideal solution obeys Raoults Law
Reason : In an ideal solution, solvent-solvent as well as solute-solute interactions are similar to solute-solvent interactions. [1]
(a) both assertion and reason are true and reason is the correct explanation of assertion
(b) both assertion and reason are true but reason is not the correct explanation of assertion
(c) assertion is true but reason is false
(d) both assertion and reason are false

Q.4 Which of the following is not an ideal solution? [1]
(a) Benzene & toluene   (b) n – Hexane & n – Heptane
(c) Ethyliodide & ethyl bromide   (d) Ethanol and water

Q.5 Which of the following shows negative deviation from Raoults law? [1]
(a) Phenol and aniline   (b) Benzene and toluene
(c) Acetone and ethanol   (d) Bcnzene and acetone

Q.6 Assertion (A) : When NaCI is added to water, a depression in freezing point is observed.
Reason (R): The lowering of vapour pressure of a solution causes the depression in freezing point.
[1]
(a) Assertion and Reason are correct and R is the correct explanation of A.
(b) Both A and R are correct but R is not the correct explanation of A.
(c) A is correct but R is wrong
(d) A is wrong but R is correct

Q.7 200 ml of an aqueous solution of a protein contains 1 .26g of protein. At 300K, the osmotic pressure of this solution is found to be 2.52 x 10^{-3} bar. Find the molar mass of protein .
(R =0.083 Lbar mol^{-1} K^{-1}) [3]

Q.8 A 0.25 M glucose solution at 370.28 K has approximately the pressure as blood. What is the osmotic pressure of blood? [3]

Q.9 What is the mass of glucose ($C_6H_{12}O_6$) in it one litre solution is isotonic with 6g L^{-1} of urea (NH_2CONH_2)? [2]

Q.10 (i)What is azeotropic mixture? Give example.
(ii) Differentiate between minimum boiling azeotrope & maximum boiling azeotrope? Give Example also. [3]

Q.11 What type of non-ideal solution shows minimum boiling azeotrope? [1]

Q.12 What type of non-ideal solution shows maximum boiling azeotrope? [1]

Q.13 10ml of liquid A is mixed with 10ml of liquid B, the volume of the resultant solution is 19.9ml. What type of deviation expected from Raoult's law. [1]

Q.14 Calculate the osmotic pressure of 5% solution of urea at 27°C? [3]

Q.15 Raw mangoes shrivel when pickled in brine solution.
1.Name the process behind this.
2.Define that process. [1]

Q.16 What type of deviation from Rauolt's law is exhibited by a mixture of phenol and aniline?Give reason ? Explain with the help of graph. [3]

Q.17 $P_A = P°_A \chi_A$

$P_B = P°_B \chi_B$

$\Delta_{mix}V = O$

1.Arun said to Subin that it is the condition for a type of solutions.Identify the type of solutions.

2. State the law on which this graph is based.

3.What are the differences between ideal and non-ideal solutions? [3]

Q.18 {JARA KARKE TO DEKHO OR KARKE DIKHAO … EASY HAI BUT NAYA HAI }

The empirical formula of a non-electrolyte(X) is CH_2O. A solution containing six gram of X exerts the same osmotic pressure as that of 0.025 M glucose solution at the same temperature. The molecular formula of X is

(a) $C_2H_4O_2$ (b) $C_8H_{16}O_8$ (c) $C_4H_8O_4$ (d) CH_2O [3]