

Solutions

**Class
12**

MCQs

Chemistry

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Unit : Solutions

- What is the molality of a solution containing 200 mg of urea (molar mass 60 gm/mol) dissolved in 40 gm of water?**
(A) 0.083 (B) 0.825
(C) 0.498 (D) 0.742
- The volume of ethyl alcohol (density 1.15 g/mL) that must be added to prepare 100 mL of 0.5 M ethyl alcohol solution in water is:**
(A) 1.15 mL (B) 2.0 mL
(C) 2.15 mL (D) 2.30 mL
- 16.02×10^{20} molecules of urea are present in 100 mL of its solution. The concentration of solution is:**
(A) 0.01 M (B) 0.001 M
(C) 0.2 M (D) 0.1 M
- How many grams of concentrated nitric acid solution should be used to prepare 250 mL of 2.0 M nitric acid. The concentrated acid is 70% HNO_3 .**
(A) 45.0 gm conc. HNO_3 (B) 50.0 gm conc. HNO_3
(C) 55.0 gm conc. HNO_3 (D) 60.0 gm conc. HNO_3
- The normality of orthophosphoric acid (H_3PO_4) having purity of 70% by weight and specific gravity 1.54 is:**
(A) 11 N (B) 22 N
(C) 33 N (D) 44 N
- The molarity of H_2SO_4 solution, which has a density 1.84 gm/cc at 35 °C and contains 98 % by weight is:**
(A) 1.84 M (B) 18.4 M
(C) 2.68 M (D) 26.8 M
- In which case Raoult's Law is not applicable?**
(A) 1 M Sucrose (B) 1 M Urea
(C) 1 M Glucose (D) 1 M Sodium Chloride
- P_A and P_B are the vapour pressure of pure liquid components A and B respectively of an ideal binary solution. If ' X_A ' represents mole fraction of component 'A', the total vapour pressure of the solution will be:**
(A) $P_A + X_A (P_B - P_A)$ (B) $P_A + X_A (P_A - P_B)$
(C) $P_B + X_A (P_B - P_A)$ (D) $P_B + X_A (P_A - P_B)$
- Which of the following will show negative deviation from Raoult's law?**
(A) Acetone – Benzene (B) Acetone – Ethanol
(C) Benzene – Methanol (D) Acetone – Chloroform

1 – A	2 – B	3 – A	4 – A	5 – C	6 – B	7 – D	8 – D	9 – D
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10. Which one of the following gasses has the lowest value of Henry's law constant?
(A) N_2 (B) He
(C) CO_2 (D) O_2
11. A solution of two liquids boils at a temperature more than the boiling point of either of them. Hence, the binary solution shows:
(A) Negative deviation from Raoult's law
(B) Positive deviation from Raoult's law
(C) No deviation from Raoult's law
(D) Positive or Negative deviation from Raoult's law depending upon the composition.
12. Choose the correct statement. When concentration of a salt solution increased:
(A) Boiling point decreases while vapour pressure increases.
(B) Boiling point increases while vapour pressure decreases.
(C) Freezing point decreases while vapour pressure increases.
(D) Freezing point increases while vapour pressure decreases.
13. Lowering of vapour pressure of an aqueous solution of a non-volatile, non-electrolyte 1 molal aqueous solution at $100^\circ C$ is:
(A) 14.12 torr (B) 31.2 torr
(C) 13.45 torr (D) 35.2 torr
14. Out of the following 0.10 molal aqueous solutions, which one will exhibit the largest freezing point depression?
(A) KCl (B) K_2SO_4
(C) $C_6H_{12}O_6$ (D) $Al_2(SO_4)_3$
15. The colligative property is not represented by :
(A) Elevation in boiling point
(B) Osmotic pressure
(C) Optical activity
(D) Relative lowering of vapour pressure
16. The osmotic pressure of 12% solution of cane-sugar at $17^\circ C$ is:
(A) 2.42 atm (B) 4.33 atm
(C) 8.35 atm (D) 16.30 atm
17. What mass of non-volatile solute (molar mass = 40 gm/mol) should be dissolved in 114 gm of octane to lower its vapour pressure by 20% ?
(A) 9.8 gm (B) 10.0 gm
(C) 11.4 gm (D) 12.8 gm

10 – C	11 – A	12 – B	13 – C	14 – D	15 – C	16 – C	17 – B
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18. What is the freezing point of a solution containing 8.1 gm HBr in 100 gm water? Assuming the acid to be 90% ionised (given K_f for water = 1.86 K/mol).
- (A) +0.35 (B) -0.35
(C) +3.54 (D) -3.54
19. The molar concentration of the solution having osmotic pressure 0.0821 atm at 300 K will be:
- (A) 3.0 (B) 0.3
(C) 0.03 (D) 0.003
20. During the depression of freezing point experiment an equilibrium is established between the molecules of:
- (A) Liquid solvent and solid solvent
(B) Liquid solute and solid solvent
(C) Liquid solute and solid solute
(D) Liquid solvent and solid solute
21. The molar mass of the solute NaOH obtained from the measurement of the osmotic pressure of its aqueous solution at 27 °C is 25 gm/mol. Therefore, its ionisation percentage in this solution is:
- (A) 50% (B) 60%
(C) 70% (D) 80%
22. Which of the following pair of solutions are expected to be isotonic at the same temperature?
- (A) 0.2 M urea and 0.2 M NaCl
(B) 0.1 M urea and 0.2 M $MgCl_2$
(C) 0.1 M NaCl and 0.1 M Na_2SO_4
(D) 0.1 M $Ca(NO_3)_2$ and 0.1 M Na_2SO_4
23. The relative lowering of vapour pressure is equal to the ratio between the number of
- (A) Solute molecules to the solvent molecules
(B) Solute molecules to the total molecules in the solution
(C) Solvent molecules to the total molecules in the solution
(D) Solvent molecules to the total number of ions of the solute.
24. Relative lowering of vapour pressure of a dilute solution is 0.2. What is the mole fraction of the non-volatile solute?
- (A) 0.8 (B) 0.5
(C) 0.3 (D) 0.2

18 – D	19 – C	20 – A	21 – B	22 – D	23 – B	24 – D
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25. The mass of glucose that should be dissolved in 50 gm of water in order to produce the same lowering of vapour pressure as is produced by dissolving 1 gm of urea in the same quantity of water is:
(A) 1 gm (B) 3 gm
(C) 6 gm (D) 18 gm
26. The freezing point of 1 % solution of lead nitrate in water will be:
(A) 2 °C (B) 1 °C
(C) 0 °C (D) below 0 °C
27. A solution containing 10 gm per dm³ of urea (molar mass = 60 gm/mol) is isotonic with a 5% solution of a non-volatile solute. The molecular mass of this non-volatile solute is:
(A) 300 gm/mol (B) 250 gm/mol
(C) 350 gm/mol (D) 270 gm/mol
28. Which has the least freezing point?
(A) 1 % C₁₂H₂₂O₁₁ (B) 1 % KCl
(C) 1 % CaCl₂ (D) 1 % C₆H₁₂O₆
29. Which one of the statements given below concerning properties of solution, describe a colligative effect?
(A) Boiling point of pure water decreases by the addition of ethanol.
(B) Vapour pressure of pure water decreases by the addition of nitric acid.
(C) Vapour pressure of pure benzene decreases by the addition of naphthalene.
(D) Boiling point of pure benzene increases by addition of toluene.
30. The Van't Hoff factor (i) for a compound which undergoes dissociation in one solvent and association in other solvent is respectively:
(A) Greater than one and less than one
(B) Less than one and greater than one
(C) Greater than one and greater than one
(D) Less than one and less than one
31. 138 g of ethyl alcohol is mixed with 72 g of water. The ratio of mole fraction of alcohol to water is.
(A) 1 : 4 (B) 1 : 2
(C) 3 : 4 (D) 1 : 1
32. How many grams of sulphuric acid is to be dissolved to prepare 200 mL aqueous solution having concentration of H₃O⁺ ions 1 Molar at 25 °C ?
(A) 4.9 gm (B) 9.8 gm
(C) 12.6 gm (D) 19.6 gm

25 – B

26 – D

27 – A

28 – C

29 – C

30 – A

31 – C

32 – B

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33. Mole fraction of the solute in a 1 molal aqueous solution is:
(A) 1.77 (B) 0.177
(C) 0.0177 (D) 0.0344
34. 25.3 grams of sodium carbonate (Na_2CO_3) is dissolved in enough water to make 250 mL of solution. If sodium carbonate dissociates completely, molar concentration of sodium ion and carbonate and are respectively?
(A) 0.477 M and 0.477 M (B) 0.955 M and 1.910 M
(C) 1.90 M and 1.910 M (D) 1.910 M and 0.955 M
35. 2.5 cm^3 of 0.2 M H_2SO_4 solution is diluted to 0.5 dm^3 . Find normality of the diluted solution.
(A) 0.002 M (B) 0.02 M
(C) 0.2 M (D) 2.0 M
36. 4.0 gm of NaOH is dissolved in 100 mL solution. The normality of the solution is:
(A) 0.1 N (B) 0.5 N
(C) 4.0 N (D) 1.0 N
37. Calculate the mass of urea (NH_2CONH_2) required in making 2.5 Kg of 0.25 molal aqueous solution.
(A) 37.5 gm (B) 53.7 gm
(C) 73.5 gm (D) 75.3 gm
38. What is the mole fraction of benzene in solution containing 30 % by mass in CCl_4 ?
(A) 1.459 (B) 0.459
(C) 4.159 (D) None of these
39. 50 cm^3 of 0.2 N HCl is titrated against 0.1 N NaOH solution. The titration is discontinued after adding 50 cm^3 of NaOH. The remaining titration is completed by adding 0.5 N KOH. The volume of KOH required for completing the titration is.
(A) 12 mL (B) 10 mL
(C) 8 mL (D) 5mL
40. Molarity of a solution containing 5.0 gm of NaOH in 250 mL solution is:
(A) 0.1 M (B) 0.2 M
(C) 0.4 M (D) 0.5 M
41. The mass % of NaOH in 1.25 molal NaOH solution is:
(A) 1.25 % (B) 3.50 %
(C) 4.76 % (D) 5.28 %

33 – C	34 - D	35 – A	36 – D	37 – A	38 – B	39 – B	40 – D	41 – C
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42. 60 mL of 0.2 N H_2SO_4 , 10 mL of 0.5 N HNO_3 and 30 mL of 0.1 N HCl are mixed. The normality of the resulting mixture is:
(A) 0.1 N (B) 0.2 N
(C) 0.3 N (D) 0.4 N
43. The molarity of a solution obtained by mixing 800 mL of 0.5 M HCl with 200 mL of 1 M HCl will be:
(A) 0.6 M (B) 0.8 M
(C) 0.2 M (D) 0.4 M
44. Two bottles 'A' and 'B' contains 1 M and 1 m aqueous solution of H_2SO_4 respectively.
(A) 'A' is more concentrated than 'B'
(B) 'B' is more concentrated than 'A'
(C) Concentration of 'A' is equal to concentration of 'B'
(D) It is not possible to compare the concentration
45. The volume of water is to be added to 100 cm^3 of 0.5 N H_2SO_4 to get decinormal concentration is :
(A) 400 mL (B) 450 mL
(C) 500 mL (D) 550 mL
46. 10 mL of 0.1 N monobasic acid is required to neutralised 15 mL of NaOH solution whose normality is :
(A) 1.5 N (B) 0.15 N
(C) 0.066 N (D) 0.66 N
47. Concentrated H_2SO_4 is 98% by mass and has density 1.80 gm/mL. Volume of acid required to make 1 L of 0.1 M H_2SO_4 solution is :
(A) 11.01 mL (B) 16.35 mL
(C) 8.35 mL (D) 5.55 mL
48. An aqueous solution of glucose is 10 % in strength. The volume in which 1 mole of it is dissolved will be :
(A) 18 L (B) 9 L
(C) 4.5 L (D) 1.8 L
49. The volume of 10 N and 4 N HCl required to make 1 L of 7 N HCl are :
(A) 0.60 L of 10 N HCl and 0.40 L of 4 N HCl
(B) 0.50 L of 10 N HCl and 0.50 L of 4 N HCl
(C) 0.80 L of 10 N HCl and 0.20 L of 4 N HCl
(D) 0.25 L of 10 N HCl and 0.75 L of 4 N HCl
50. Mole fraction of a solute in benzene is 0.2 then find molality of solute.
(A) 2.2 m (B) 3.2 m
(C) 3.6 m (D) 4.2 m

42 – B

43 – A

44 – A

45 – A

46 – C

47 – D

48 – D

49 – B

50 – B

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51. To prepare a solution of concentration of 0.03 gm/mL of AgNO_3 , what amount of AgNO_3 should be added in 60 mL of solution?
(A) 0.8 gm (B) 0.18 gm
(C) 1.8 gm (D) None of these
52. How much volume of $1 \text{ M H}_2\text{SO}_4$ is required to neutralise 20 mL of 1 M NaOH ?
(A) 10 mL (B) 15 mL
(C) 20 mL (D) 25 mL
53. Vapour pressure of chloroform (CHCl_3) and dichloromethane (CH_2Cl_2) at 25°C are 200 mmHg and 41.5 mmHg respectively. Vapour pressure of the solution obtained by mixing 25.5 grams of CHCl_3 and 40.0 grams of CH_2Cl_2 at the same temperature will be :
(A) 173.9 mmHg (B) 375.9 mmHg
(C) 615.0 mmHg (D) 90.63 mmHg
54. The system that forms maximum boiling azeotrope is :
(A) Ethanol and Acetone (B) Carbon disulphide and acetone
(C) Acetone and chloroform (D) Benzene and toluene
55. Among the following, the azeotropic mixture is :
(A) $\text{C}_2\text{H}_5\text{Br} + \text{C}_2\text{H}_5\text{Cl}$ (B) $\text{CCl}_4 + \text{CHCl}_3$
(C) $\text{C}_6\text{H}_{14} + \text{C}_7\text{H}_{16}$ (D) $\text{C}_6\text{H}_5\text{Br} + \text{C}_6\text{H}_5\text{Cl}$
56. The vapour pressure of pure solvent is 0.8 mmHg at a particular temperature. On addition of a non-volatile solute 'A' the vapour pressure of solution become 0.6 mmHg . The mole fraction of component 'A' is :
(A) 0.75 (B) 0.52
(C) 0.35 (D) 0.25
57. At 300 K , the vapour pressure of an ideal solution containing 1 mole of liquid 'A' and 2 moles of liquid 'B' is 500 mmHg . The vapour pressure of the solution increases by 25 mmHg , If one more mole of 'B' is added to the above ideal solution at 300 K . Then the vapour pressure of 'A' in its pure state is :
(A) 200 mmHg (B) 250 mmHg
(C) 300 mmHg (D) 600 mmHg
58. Henry's law constant of oxygen is $1.4 \times 10^{-3} \text{ mol L}^{-1} \text{ atm}^{-1}$ at 298 K . How much of oxygen is dissolved in 100 mL at 298 K when the partial pressure of oxygen is 0.5 atm ?
(A) 2.24 mg (B) 3.2 mg
(C) 1.4 mg (D) 2.82 mg

51 – C

52 – A

53 – D

54 – C

55 – B

56 – D

57 – C

58 – A

59. At 300 K two pure liquid 'A' and 'B' have vapour pressure respectively 150 mmHg and 100 mmHg. In an equimolar liquid mixture of 'A' and 'B', the mole fraction of 'B' in the vapour mixture at this temperature is :
 (A) 0.8 (B) 0.6
 (C) 0.5 (D) 0.4
60. Vapour pressure of pure 'A' is 70 mmHg at 298 K. It forms an ideal solution with 'B' in which mole fraction of 'A' is 0.8. If the vapour pressure of the solution is 84 mmHg at 298 K, the vapour pressure of pure 'B' at 298 K is :
 (A) 140 mmHg (B) 70 mmHg
 (C) 56 mmHg (D) 28 mmHg
61. Which of the following liquid pairs show a positive deviation from Raoult's law ?
 (A) Water and Nitric acid (B) Benzene and Methanol
 (C) Water and Hydrochloric acid (D) Acetone and Chloroform
62. At 298 K, the total pressure of an ideal solution obtained by mixing 3 moles of 'A' and 2 moles of 'B' is 184 torr. What is the vapour pressure (in torr) of pure 'B' at the same temperature ? (Vapour pressure of 'A' at 298 K is 200 torr)
 (A) 100 (B) 120
 (C) 140 (D) 160
63. If two substances 'A' and 'B' have vapour pressure in pure respectively 1 : 2 and have mole fraction in solution 1 : 2 respectively then mole fraction of 'A' in vapour is :
 (A) 0.1 (B) 0.2
 (C) 0.3 (D) 0.52
64. If ' α ' is the degree of dissociation of Na_2SO_4 then Van't Hoff factor (i) used for calculating the molecular mass is :
 (A) $1 + \alpha$ (B) $1 - \alpha$
 (C) $1 + 2\alpha$ (D) $1 - 2\alpha$
65. Distribution Law was given by :
 (A) Nernst (B) Ostwald
 (C) Henry (D) Van't Hoff
66. What is the freezing point of a solution containing 8.1 gm HBr in 100 gm Water assuming the acid to be 90 % ionised ? (K_f for water is 1.86 K/mol)
 (A) 0 °C (B) 0.85 °C
 (C) 3.53 °C (D) 5.62 °C

59 – D	60 – A	61 – B	62 – D	63 – B	64 – C	65 – A	66 – C
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67. Pure benzene freezes at 5.2 °C. A solution of 0.223 gm of phenylacetic acid ($\text{C}_6\text{H}_5\text{CH}_2\text{COOH}$) in 4.4 gm of benzene ($K_f = 5.12 \text{ Kg/mol}$) freezes at 4.47 °C. From the observation, one can conclude that :
- (A) Phenylacetic acid exists as such in benzene
 - (B) Phenylacetic acid undergo partial ionisation in benzene
 - (C) Phenylacetic acid undergo complete ionisation in benzene
 - (D) Phenylacetic acid dimerises in benzene
68. What happens when an egg is kept in saturated solution of NaCl after removing its hard shell in dilute HCl ?
- (A) Egg will shrink
 - (B) Egg will swell
 - (C) Egg will remain same
 - (D) Egg will first shrink and then swell
69. What happens to freezing point to benzene when naphthalene is added ?
- (A) Increases
 - (B) Decreases
 - (C) Remains unchanged
 - (D) First increases and then decreases
70. Dissolution of 1.5 gm of a non-volatile solute (molecular weight = 60) in 250 gm of a solvent reduces its freezing point by 0.01 °C. Find the molal depression constant of the solvent.
- (A) 0.1
 - (B) 0.01
 - (C) 0.001
 - (D) 0.0001
71. 20 gm of a non-volatile solute is added to 500 gm of solvent. Freezing point of pure solvent and solution are 5.48 °C and 4.47 °C. Molecular mass of the solute is: (Given K_f is 1.93 °C/m)
- (A) 70.6
 - (B) 73.2
 - (C) 75.2
 - (D) 76.4
72. A 0.2 molal HX acid ionises 20 % in water. ($K_f = 1.86$) Freezing point of the solution is :
- (A) -0.45
 - (B) -0.50
 - (C) -0.55
 - (D) -0.60
73. Which of the following can be measured by the Ostwald-Walker dynamic method ?
- (A) Vapour pressure of the solvent
 - (B) Lowering of Vapour pressure
 - (C) Relative lowering of vapour pressure
 - (D) All of the above

67 – D	68 – A	69 – B	70 – A	71 – D	72 – A	73 – C			
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- 74. Camphor is often used in molecular mass determination because**
(A) It is readily available
(B) It has a very high cryoscopic constant
(C) It is volatile in nature
(D) It is solvent for organic substances
- 75. Which of the following colligative properties can provide molar mass of proteins with greater precision ?**
(A) Relative lowering of vapour pressure
(B) Elevation in boiling point
(C) Depression in freezing point
(D) Osmotic pressure
- 76. The mole fraction of solute in 2.5 molal aqueous solution is :**
(A) 0.086 (B) 0.068
(C) 0.034 (D) 0.043
- 77. The volume of 80 % sulphuric acid (H_2SO_4) by weight required to prepare 1 L of 0.2 M H_2SO_4 is :**
(A) 13.60 mL (B) 15.60 mL
(C) 9.08 mL (D) 71.08 mL
- 78. Which of the following statement is false ?**
(A) Both molality and mole fraction do not change with temperature.
(B) 1 M aqueous solution of glucose is more concentrated than 1 m solution.
(C) Sodium amalgam is an example of solid in solid solution.
(D) PPM by mass express mass of solute in gram per 10^3 Kg of the sample.
- 79. The density of a solution prepared by dissolving 120 gm of urea (molar mass= 60 gm/mol) in 1000 gm of water is 1.15 gm/mL. The molarity of this solution is :**
(A) 1.78 M (B) 2.05 M
(C) 1.02 M (D) 2.36 M
- 80. A 6.9 M solution of KOH in water contains 30% by mass of KOH. The density of KOH solution is :**
(A) 2.061 gm/mL (B) 1.288 gm/mL
(C) 1.106 gm/mL (D) 1.823 gm/mL
- 81. The mole fraction of water in a sulphuric acid solution is 0.85. The molality of the solution is :**
(A) 4.9 (B) 8.6
(C) 9.2 (D) 9.8

74 – C	75 – D	76 – D	77 – A	78 – C	79 – B	80 – B	81 – D
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82. The vapour pressure of a solution of benzene and toluene is (mole fraction of benzene is 0.2, vapour pressure of pure benzene and pure toluene are 160 mmHg and 60 mmHg respectively)
 (A) 48 mmHg (B) 42 mmHg
 (C) 37 mmHg (D) 35 mmHg
83. Which of the following solution pair can be separated into its pure components by fractional distillation ?
 (A) Water and Ethyl alcohol (B) Water and Hydrochloric acid
 (C) n-Hexane and n-Heptane (D) Acetone and Chloroform
84. Which of the following statements about the ideal solution is correct ?
 (A) Enthalpy of mixing = 0
 (B) Free energy change of mixing = 0
 (C) Volume of mixing = 0
 (D) Obeys Raoult's law
85. Two liquids 'A' and 'B' have vapour pressure of 0.685 bar and 0.264 bar respectively. In an ideal solution of the two, the mole fraction of 'A' at which the two liquids have equal partial pressure is :
 (A) 0.306 (B) 0.714
 (C) 0.286 (D) 0.386
86. The molal elevation constant is the ratio of elevation in boiling point to :
 (A) Molarity (B) Molality
 (C) Boiling point of pure solvent (D) Mole fraction
87. The amount of solute (molar mass = 60 gm/mol) that must be added to 180 gm of water so that vapour pressure of water is lowered by 10% is :
 (A) 20 gm (B) 30 gm
 (C) 40 gm (D) 60 gm
88. A solution containing 62 gm of ethylene glycol (molar mass 62 gm/mol) in 250 gm water is cooled to -10°C . If K_f for water is $1.86 \text{ K Kg mol}^{-1}$, the amount of water separated as ice is :
 (A) 64 gm (B) 48 gm
 (C) 32 gm (D) 16 gm
89. On dissolving 3.24 gm of sulphur in 40 gm of benzene, boiling point of solution was higher than that of benzene by 0.81 K. The molecular formula of sulphur is (Given that K_b for benzene is $2.56 \text{ K Kg mol}^{-1}$):
 (A) S_2 (B) S_4
 (C) S_6 (D) S_8

82 – A

83 – C

84 – B

85 – C

86 – B

87 – D

88 – A

89 – D

- 90. What happens when blood cells are placed in pure water ?**
 (A) The fluid in blood cells rapidly moves into water
 (B) The water molecules rapidly move into blood cells
 (C) The blood cells dissolve in water
 (D) The blood cell first shrinks and then swell up.
- 91. An aqueous solution boil at 100.512 °C. The freezing point of the solution is ($K_f = 1.86 \text{ K Kg mol}^{-1}$ and $K_b = 0.512 \text{ K Kg mol}^{-1}$) :**
 (A) 0.93 °C (B) -0.93 °C
 (C) 1.86 °C (D) -1.86 °C
- 92. Solution 'A' contains 1 gm of urea in 100 mL of solution and solution 'B' contains 2 gm of glucose in 100 mL of solution. Point out the correct statement :**
 (A) Boiling point of 'A' will be less than 'B'
 (B) Freezing point of 'A' will be less than 'B'
 (C) Osmotic pressure of 'A' will be less than 'B'
 (D) Both will have same boiling point, freezing point, and osmotic pressure.
- 93. 1 mole of a liquid 'A' and 2 mole of liquid 'B' form a solution having a total vapour pressure of 46 torr. The vapour pressure of pure liquids 'A' and 'B' are 36 and 48 torr respectively. The solution :**
 (A) is an ideal solution
 (B) shows negative deviation from Raoult's law
 (C) shows positive deviation from Raoult's law
 (D) dissolution is exothermic
- 94. Two liquids 'A' and 'B' form ideal solutions having vapour pressure 200 and 100 mmHg respectively. The mole fraction of 'A' in vapour phase in equilibrium with an equimolar solution of the two is :**
 (A) 0.33 (B) 0.61
 (C) 0.46 (D) 0.67
- 95. What will be the relation between osmotic pressure at 273 K if 12 gm of urea, 12 gm of glucose and 12 gm of sucrose have osmotic pressures P1, P2 and P3 respectively when dissolved in the same amount of water ?**
 (A) $P_3 > P_2 > P_1$ (B) $P_1 > P_2 > P_3$
 (C) $P_2 > P_1 > P_3$ (D) $P_3 > P_1 > P_2$

90 – B	91 – D	92 – B	93 – C	94 – D	95 – B	
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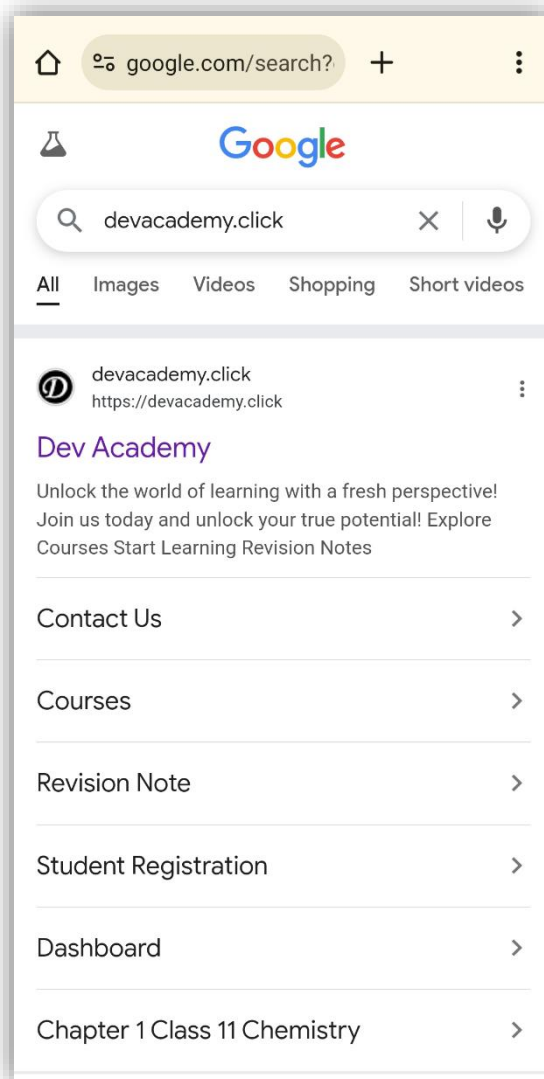
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