JEE - 12 CHEM

# Question 1

At a particular temperature, the vapour pressures of two liquids A and B are 120 mm and 180 mm of mercury respectively. If 2 moles of A and 3 moles of B are mixed to form an ideal solution, the vapour pressure of the solution at the same temperature will be: (in mm of mercury)

1. 156
2. 145
3. 150
4. 108

# Question 2

An aqueous solution of 2

# Question 3

Heptane and octane form an ideal solution. At 373 K, the vapour pressures of the two liquid components are 105.2 kPa and 46.8 kPa respectively. What will be the vapour pressure of a mixture of 26.0 g of heptane and 35 g of octane?

1. 74.3 kPa
2. 73.43 kPa
3. 76.42 kPa
4. 79.50 kPa

# Question 4

Calculate the mass of ascorbic acid ( ) to be dissolved in of acetic acid to lower its melting point by . Take .

1. 4.52 g
2. 6.10 g
3. 5.08 g
4. 7.34 g

# Question 5

Value of Henry’s constant ?

1. Increases with increase in temperature
2. Decreases with increase in temperature
3. Remains constant
4. First increases then decreases

# Question 6

The volume of water to be added to of to get decinormal concentration is:

# Question 7

On increasing temperature, vapour pressure of a substance \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. always increases.
2. decreases.
3. does not depend on temperature.
4. partially depends on temperature.

# Question 8

Which of the following solution in water possesses the lowest vapour pressure?

1. (M)
2. None of these

# Question 9

The osmotic pressure of a solution increases if:

1. more of solute is added
2. number of solute molecules is increased
3. temperature is increased
4. any one of the change is made

# Question 10

If, at 298 K water is the solvent, and Henry’s law constant for CO is 1.67 kbar and the constant of argon is 40.3 kbar, which of the following statements is true?

1. Argon is more soluble than CO
2. Argon is less soluble than CO
3. Argon is insoluble in water
4. Argon and CO are equally soluble