

NEET SOLUTIONS — DEPRESSION OF FREEZING POINT — PYQS

Max. Marks: 20

Questions: 5

Section A (MCQ) — 5 questions

- Q.1** The freezing point depression constant (K_f) of benzene is $5.12 \text{ K kg mol}^{-1}$. The freezing point depression for the solution of molality 0.078 m containing a non-electrolyte solute in benzene is rounded off upto two decimal places :

[NEET (UG) 2020]

(1) 0.80 K (2) 0.40 K (3) 0.60 K (4) 0.20 K

Scan or tap for the full solution



- Q.2** If molality of the dilute solution is doubled, the value of molal depression constant (K_f) will be

[NEET 2017]

(1) halved (2) tripled
(3) unchanged (4) doubled.

Scan or tap for the full solution



- Q.3** A solution of sucrose (molar mass = 342 g mol^{-1}) has been prepared by dissolving 68.5 g of sucrose in 1000 g of water. The freezing point of the solution obtained will be (K_f for water = $1.86 \text{ K kg mol}^{-1}$)

[AIPMT 2010 (Prelims)]

(1) -0.372°C (2) -0.520°C
(3) $+0.372^\circ\text{C}$ (4) -0.570°C

Scan or tap for the full solution



- Q.4** 1.00 g of a non-electrolyte solute (molar mass 250 g mol^{-1}) was dissolved in 51.2 g of benzene. If the freezing point depression constant, K_f of benzene is $5.12 \text{ K kg mol}^{-1}$, the freezing point of benzene will be lowered by

[AIPMT 2006]

(1) 0.2 K (2) 0.4 K (3) 0.3 K (4) 0.5 K

Scan or tap for the full solution



- Q.5** A solution of urea (mol. mass 60 g mol^{-1}) boils at 100.18°C at the atmospheric pressure. If K_f and K_b for water are 1.86 and $0.512 \text{ K kg mol}^{-1}$ respectively, the above solution will freeze at

[AIPMT 2005]

(1) 0.654°C (2) -0.654°C
(3) 6.54°C (4) -6.54°C

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5						
Ans.	2	3	1	2	2						