

سؤال حرفي

(س) calculate the freezing point of a solution containing 20g of KCl and 2200g H₂O. (M_m KCl=74.55) The Molal freezing point depression constant ($K_f = 1.86$)

1. +0.23 C
2. -0.23 C
3. -0.45 C
4. -1.23 C
5. +0.45 C

سؤال حرفي

(س) An aqueous solution of - will produce a basic solution.

1. CsBr
2. Mg (ClO₄)₂
3. NaNO₂
4. NH₄NO₃
5. KNO₃

acidic
neutral

سؤال حرفي

(س) When 0.5 g of unknown nonelectrolyte compound is dissolved in 10g of camphor ($K_f=40$) freezing point of the solution lower than that of pure camphor. If $\Delta T=4.43$, calculate the unknown compound M_m?

1. 55.4 g/mol
2. 0.451 g/mol
3. 3.54 g/mol
4. 454.5 g/mol

سؤال حرفي

(س) At a given temperature the Vapor pressure of benzene and toluene are 183 mmHg and 59.2 mmHg, calculate the total pressure over a solution of benzene and toluene ($X_{\text{benzene}} = 0.56$).

1. 102 mmHg
2. 242 mmHg
3. 121 mmHg
4. 129 mmHg

(س) In which of the following aqueous solutions does the weak acid exhibit the highest percentage ionization?

(بدل Highest إجت lowest)

- 1) 0.01M H₂CO₃ ($K_a = 4.5 \times 10^{-7}$)
- 2) 0.01M H₂SO₃ ($K_a = 1.4 \times 10^{-2}$)
- 3) 0.01M HCN ($K_a = 6.2 \times 10^{-10}$)
- 4) 0.01M HOCl ($K_a = 3.5 \times 10^{-8}$)

(تغير ارقام فقط)

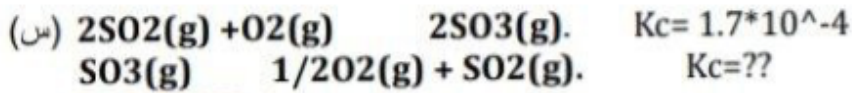
(س) The acid-dissociation constant of hydrocyanic acid (HCN) at 25°C is 4.9×10^{-10} . What is the pH of an aqueous solution of 0.060 M sodium cyanide (NaCN)?

- 1) 11.04
- 2) 9×10^{-12}
- 3) 2.96
- 4) 1.1×10^{-3}

(جاءت نفس الفكرة)

(س). $2\text{COF}_2(\text{g}) \rightleftharpoons \text{CO}_2(\text{g}) + \text{CF}_4(\text{g})$
The equilibrium constant (K_c) is 2 at 1000C for the reaction. If 0.43mol CO₂ and 0.43mol CF₄ are into 1L flask What will be the concentration of COF₂ at equilibrium?
1. 0.31M

2. 0.15M
3. 0.22M
4. 1M



- (نفس الفكرة بس ارقام مختلفه)
1. 7.7×10^{-4}
 2. 3.4×10^2
 3. 1.6×10^{-6}
 4. 8.5

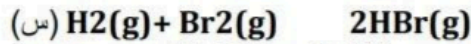
IF

- تم شرحه بالمراجعه وموجود بالملف الذي تم نشره
1. $Q_c < K_c$ system proceeds from left to right to reach equilibrium (من اليسار لليمين)
 2. $Q_c = K_c$ The system is at equilibrium (متساوي)
 3. $Q_c > K_c$ system proceeds from right to left to reach equilibrium. (من اليمين للييسار)

When a non-volatile non-electrolyte solute is added to a volatile solvent, _____

1. the freezing point of the solvent will decrease.
2. the boiling point of the solvent will decrease.
3. the vapor pressure of the solvent will increase.
4. both freezing and boiling points will increase.
5. the vapor pressure of the solvent will stay the same.

بالمراجعه اللي حضروا ذاكرين قتلتم لو عندي مي ضفت عليها سكر راح تحتاج وقت اكثر لتغلي ولو جيت نجمدها بدنا حراره تجمد اقل وبالنسبه للبخر قتلتم انا عند ضغط بخار معين للمي اذا ضفت ماده راح يروح جزء من البخار للماده (انو يتفاعل مي مع ماده فتقل كميه مي) لهيك بقل بخار



A mixture of 0.682 mol of H_2 and 0.440 mol of Br_2 is combined in a reaction vessel with a volume of 2L. At equilibrium at 700 K, there are 0.536 mol of H_2 present. At equilibrium, how many mol of HBr present in the reaction vessel?

نفس السؤال بس كان معطيني تركيز جاهز لهيك كان اكثر مباشر من هاد

- 1) 0.146
- 2) 0.536
- 3) 0.00
- 4) 0.294
- 5) 0.440

نفس الفكرة بس غير رقم قلت عنها بالمراجعه وموجوده بالملف كانت

Ex: Calculate 0.1M CHOOH has $\text{pH} = 2.32$.
 1. Calculate K_a .

واب : 1. $K_a = 2.2 \times 10^{-4}$