



Physical_Chemistry_2nd_YUGS_EV_ST

Mid of Quize

10/100 Ten only

Name of a student عبد محمد خزل عباس Signature _____ No. 14
Mustansiriyah University 2nd SEM-2023 Bologna Process
Department of Chemistry Mid_Exam_Class_B_Paper_A

Q1/ MCQ test (Answer the following)

(Marks 50 %)

قاعدة الطور المختزلة تهتم بتوعين من المتغيرات
1: The reduced phase rule is interested in two variants?

- Answer: a) p & T b) F & T c) p & conc. d) T & conc.

الحلول المثالي يتبع قانون
2: Ideal solution follows _____ law.

- Answer: a) Raoult's b) Trouton's c) Henry's law d) Van't Hoff's law

الطور الثالث للماء ينتقل عند
3: The three phases of H₂O in the phase diagram meets?

- Answer: a) at 1 atm b) over 1 atm c) below 1atm d) at any pressure

الحلول السائل لما في السريان تكون من
4: Liquid solution of HNO₃ is formed from?

- Answer: a) 1 C b) 2 C c) 3 C d) 4 C

وهو عدد الطور لنظام تكون عدد المتغيرات و عدد المكونات واحد
5: How many phases are there when the number of variants is zero and the number of components is one?

- Answer: a) zero b) 1 c) 2 d) 3

يمكن تطبيقها لنظام المتوازن حسب
6: The Clausius-Clapeyron equation can be applied when there is an equilibrium between one of the following?

- Answer: a) L & L b) S & L c) G & L d) S & S

أحد الصيغ التالية تمثل قانون هنري
7: One of the following formulas represents the right equation of Henry's law?

- Answer: a) $P_A = \chi_A P^*_A$ b) $P_A > \chi_A P^*_A$ c) $P_A < \chi_A P^*_A$ d) none of these

تستخدم المولالية لحساب الوزن الجزيئي ل
8: Molality is used to calculate the molar mass of the?

- Answer: a) non-volatile solute b) pure solute c) pure solvent d) solution

الضغط الأسموزي يتولد عندما يتحرك المذيب الل
9: Osmosis pressure exerts when the solvent transfers to the?

- Answer: a) volatile solute b) non-volatile solute c) pure solvent d) solution

أحد الأتساء أو الفوائد لقياس هو حساب
10- One of the most important benefits of measuring ΔVP , ΔT_b , ΔT_f and ΔH is to calculate ----- of B?

- Answer: a) M b) m c) V d) p

القطر البخاري لمادة الماء عند 30+torr عندما تكون B = $\frac{n}{n+N}$
Q2/ The vapor pressure (VP) of a substance is 30 torr at 250 K. At what temperature will the substance have

VP of 150 torr? $\Delta_{vap}H$ is 45 kJ mol⁻¹? zero

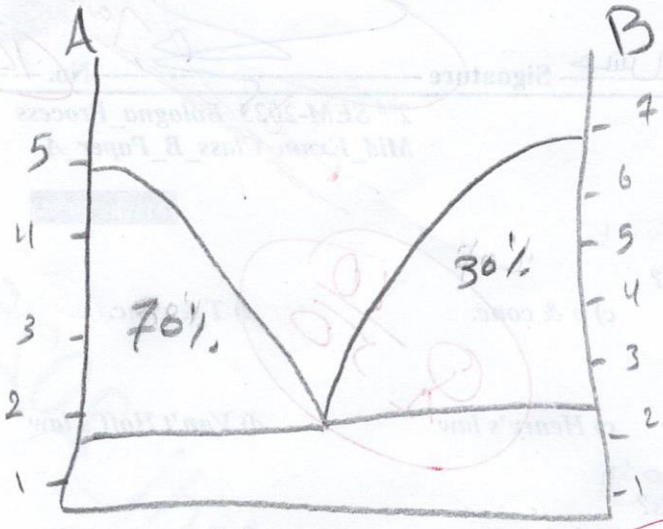
(Marks 25%)

عندما يكون ضغطها 150+torr
A تغوهد عند درجة حرارة 5 - و B عند درجة حرارة 7
المذيب الأسموزي

Q3/ Plot the phase diagram of the system (A & B) assumed that (A & B) do not react with each other. A freezes at (-5 °C) and B freezes at (7 °C), and that an eutectic mixture is formed when the ratio is 70 wt % of A and that the eutectic melts at (-10°C), then label all the parts (p & F) of the diagram? (Marks 25%)

يظهر عند درجة حرارة 10 -
zero

Q3)



Qa
Zero
25

Plot the phase diagram of the system (A & B) assumed that (A & B) do not react with each other. (A & B) freeze at -5°C and B freezes at 17°C , and that an eutectic mixture is formed when the ratio is 70 wt % of A and that the eutectic mixture is at -10°C , then label all the parts (p & f) of the diagram.