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Physical_Chemistry_2nd_YUGS_EV_ST

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2nd SEM-2026_Bologna_Process
Mid_Exam_Class_A_Paper_A

Q1/ MCO test (Answer the following)

(Marks 50 %)

- انخفاض سرعة العادم يكتف من حجم العادم
- 1: Depression of freezing point of a solution associated an increasing in?
Answer: a) T b) H c) μ d) S
- 2: When applying the reduced phase rule to condensed systems, the pressure is assumed to be ----- atm?
Answer: a) zero b) 1 c) 2 d) 3
- 3: The reduced phase rule applies when which variable is kept constant?
Answer: a) T b) conc c) p d) χ
- 4: Which One of the following expressions represents a negative deviation from Raoult's law?
Answer: a) $P_A^* \neq \chi_A P_A$ b) $P_A = \chi_A P_A^*$ c) $P_A > \chi_A P_A^*$ d) $P_A < \chi_A P_A^*$
- 5: Addition of a non-volatile solute to a pure solvent results in a change in?
Answer: a) $\Delta_{mix}H$ b) $\Delta_{mix}S$ c) $\Delta_{mix}V$ d) all of these
- 6: The difference between pure and impure solvent is?
Answer: a) $\mu^* = \mu$ b) $\mu^* > \mu$ c) $\mu^* < \mu$ d) $\mu^* \neq \mu$
- 7: The relationship between ΔT_f and χ_B is?
Answer: a) direct b) inverse c) disordered d) none of these
- 8: With the two-component system (A & B), one part of the solid phase consists of?
Answer: a) A + B b) A + solution c) B + solution d) A + eutectic
- 9: If you add a solute to a pure solvent, then there is a decrease in the ----- of the solution.
Answer: a) S b) H c) T d) μ
- 10: Dalton's law is used to calculate the partial pressure of which phase?
Answer: a) liquid b) gas c) solid d) plasma

Q2 A solution contains 4.0 g of an unknown substance in 0.5 dm³ of solution. Its osmotic pressure is 103 torr at 34.0 °C. Calculate the molar mass of the unknown substance. (Marks 25%)

Q2 zero

Q2/NO ANSWER, why?

Q3 Using the diagram below and the appropriate phase rule, fill in all the blanks and determine the composition of the all-eutectic mixture, all equilibria, all reversible and irreversible processes, and the name of the regions located to the right and left of points C, E & AB? (Marks 25%)

Q3 zero

NO ANSWER, why?



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Q2 zero
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NO ANSWER, Why?

Q3 zero
25

Two component system ()

