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Mid Quiz

Physical Chemistry 2nd YUGS_EV_ST

20/100

Twenty only



Name of a student Abduljabbar I. R. Rushdi Signature Abduljabbar I. R. Rushdi No. 15

Mustansiriyah University
Department of Chemistry

2nd SEM-2025_Bologna_Process
Mid_Exam_Class_A_Paper_C

2/50

18-03-25
Abd

01/MCO test (Answer the following)

(Marks 50 %)

1: Depression of freezing point of a solution means increasing in?

- Answer: a) T b) H c) μ d) S

2: If you apply the reduced phase rule to condensed systems, then the expected value of pressure is -----?

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

3: The reduced phase rule can be applied when the number of components is -----?

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

4: Which One of the following formulas represents the right equation of 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 the pure solvent causes 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 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 ----- phase?

- Answer: a) liquid b) gas c) solid d) plasma

02 The Π of a solution containing 4.0 g of an unknown substance per 0.5 dm³ of solution is 10³ torr at 34.0 °C. Find the molar mass of this unknown. (Marks 25%)

03 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%)



Name of a student _____ Signature _____ No. _____

Q2

Q2 zero / 25

$$P = \frac{Wt.}{TV} = \frac{4.0}{(307)(10)(15)}$$

$$P = \frac{4.0}{15.3} = P = 0.26$$

Wrong eq^s

$$34.0 + 273 = 307$$

$$\frac{0.5 \text{ dm}^3}{1000} = 5 \text{ mL}$$

$$F = C - P + 2$$

Q3 5/25

Two component system (Benzene-NaCl)

