



Mid & Quiz

Physical_Chemistry_2nd_YUGS_EV_ST

20/100 Twenty only

Name of a student _____ Signature _____ No. 21

Mustansiriyah University
Department of Chemistry

2nd SEM-2025 Bologna Process
Mid_Exam_Class_A_Paper_D

Q1/ MCQ test (Answer the following)

(Marks 50 %)

Q1 20/50

1: The Gibbs phase rule is interested in two variants?

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

2: What do you expect if you add NaCl to H₂O, an increase in the?

Answer: a) LP b) ~~VP~~ c) FP d) BP

3: The three phases of CO₂ in the phase diagram meets?

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

4: The phase of super cooling is -----?

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

5: How many phases are there when the number of variants is two and the number of components is one?

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

6: The Clapeyron equation can be applied when there is an equilibrium between one of the following?

Answer: a) ~~melt. & freez.~~ b) sub. & depo. c) vap. & cond. d) all of these

7: The relationship between VP and m is -----.

Answer: a) direct b) ~~inverse~~ c) disordered d) none of these

8: If you add a ----- to a solvent, then there is a change in the colligative properties of the solvent.

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

9: Osmotic process is used to push the solvent to the -----?

Answer: a) solute b) impure solute c) ~~mixture~~ d) pure solvent

10- One of the most important benefits of measuring molar mass of the solute is to study the change in -----.

Answer: a) m b) ~~Π~~ c) V d) p

Q2/ 0.5 mol of a non-P-solute was added to 12.0 mol of P-solvent, VP^* is 12.0 kPa at 295 K. What is the VP at 295 K? Determine the deviation of this solution from Raoult's law where $VP_{ideal} = 10$ kPa. (Marks 25%)

Q2 Zero 25

Q3/ Plot the phase diagram of the system (A & B) assumed that (A & B) do not react with each other. A freezes at (-6 °C) and B freezes at (8 °C), and that an eutectic mixture is formed when the ratio is 60 wt % of A and that the eutectic melts at (-9 °C), then label all the parts (p & F) of the diagram? (Marks 25%)

Q2 zero
25

Q3 zero
25

Q3/

