



0.5/5

Mid Quiz

Physical Chemistry 2<sup>nd</sup> YUGS\_EV\_ST

10/100

Ten only  
7ab



Name of a student

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Signature

No. 7

Mustansiriyah University  
Department of Chemistry

2<sup>nd</sup> SEM 2025 Bologna Process  
Mid Exam Class B Paper B

01/MCO test (Answer the following)

(Marks 50%)

1: If the relation between the amount of solute and the  $\Pi$  is proportional, then the right equation is?

Answer: a)  $\Pi \propto VP$  b)  $\Pi \propto BP$  c)  $\Pi \propto V$  d)  $\Pi \propto [B]$

2: If the deposition is dominated, then one of the following will be true.

Answer: a)  $\Delta_{vap}H = +ve$  b)  $\Delta_{vap}H = -ve$  c)  $\Delta_{sub}H = +ve$  d)  $\Delta_{sub}H = -ve$

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

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

4: Which One of the following formulas represents the right equation of positive 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: How many p and F of  $CO_2$  when it is positioned at the boundary of the phase?

Answer: a)  $p = 2$  &  $F = 1$  b)  $p = 3$  &  $F = 0$  c)  $p = 1$  &  $F = 2$  d)  $p = 2$  &  $F = 2$

7: Liquid water and ice are formed from?

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

8: With the two-component system (Pb & Ag), one part of the solid phase consists of?

Answer: a) pb + Ag b) Pb + solution c) Ag + solution d) Pb + eutectic

9: If you add a non-polar solute to a non-polar solvent, then the expected type of mixture will be ----- law.

Answer: a) Van't Hoff's b) Raoult's c) -ve form Raoult's d) +ve form Raoult's

10: If it is required to calculate the  $Y_A$ , then one of the following laws will be applicable?

Answer: a) Raoult b) Henry c) Dalton d) Van't Hoff

02 The VP of pure benzene is 75 mmHg at 20 °C, and VP of pure toluene is 25 mmHg at 20 °C. The mole fraction of each pure component is 0.5. What is the partial VP of each component after mixing?

(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 <sup>zero</sup>/<sub>25</sub>

Q3 <sup>0</sup>/<sub>25</sub>

Eq?

condensed

Two component system (Liqid-Solid)

