



Name of a student نور الهدى محمد Signature No. 418

Mustansiriyah University Department of Chemistry

2nd 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 a VP b) Pi a BP c) Pi a V d) Pi a [B]

2: If the deposition is dominated, then one of the following will be true. Answer: a) ΔvapH = +ve b) ΔvapH = -ve c) ΔsubH = +ve d) ΔsubH = -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) PA ≠ χAPA b) PA = χAP\* A c) PA > χAP\* A d) PA < χAP\* A

5: Addition of a non-volatile solute to the pure solvent causes a change in? Answer: a) ΔmixH b) ΔmixS c) ΔmixV d) all of these

6: How many p and F of CO2 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 YA, 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%)



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VP = 75 mm Hg  
benzen

VP = 25 mm Hg  
toluen

T = 90 °C

$\Sigma q = ?$

Two component system ( )

