

PYQSide

JEE MAIN SOLUTIONS — RELATIVE LOWERING OF VAPOUR PRESSURE — PYQS

Max. Marks: 12

Questions: 3

Section A (MCQ)

- Q.1** When 0.25 moles of a non-volatile, non-ionizable solute was dissolved in 1 mole of a solvent the vapor pressure of solution was $x\%$ of vapor pressure of pure solvent. What is $x\%$?

[JEE Main 2026 (Online) 6th April Morning Shift]

- (1) 50% (2) 60% (3) 70% (4) 80%

Scan or tap for the
full solution



Section B (Numerical)

- Q.2** A non-volatile, non-electrolyte solid solute when dissolved in 40 g of a solvent, the vapour pressure of the solvent decreased from 760 mm Hg to 750 mm Hg. If the same solution boils at 320 K, then the number of moles of the solvent present in the solution is _____. (Nearest integer)

[Given: boiling point of the pure solvent = 319.5 K, K_b of the solvent = $0.3 \text{ K kg mol}^{-1}$]

[JEE Main 2026 (Online) 4th April Morning Shift]

Scan or tap for the
full solution



- Q.3** A substance 'X' (1.5 g) dissolved in 150 g of a solvent 'Y' (molar mass = 300 g mol^{-1}) led to an elevation of the boiling point by 0.5 K. The relative lowering in the vapour pressure of the solvent 'Y' is _____ $\times 10^{-2}$. (nearest integer)

[Given: K_b of the solvent = $5.0 \text{ K kg mol}^{-1}$]

Assume the solution to be dilute and no association or dissociation of X takes place in solution.

[JEE Main 2026 (Online) 21st January Evening Shift]

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ANSWER KEY

Section A (MCQ)

Ques.	1									
Ans.	4									

Section B (Numerical)

Ques.	2	3								
Ans.	5	3								