

PART 1 - CHEMISTRY

Topic : States of matter

SECTION-B : (Maximum Marks : 4)

This section contains **ONE** question.

The answer to each question is a **NUMERICAL VALUE**.

For each question, enter the correct numerical value of the answer (in decimal notation, truncated / rounded-off to the **SECOND DECIMAL PLACE**; e.g. 6.25, 7.00, -0.33, -.30, 30.27, -127.30) in the place designated to enter the answer.

Answer to each question will be evaluated according to the following marking scheme :

Full Marks : +4 If **ONLY** the correct answer is entered;

Zero Marks : 0 In all other cases.

1. Two cylinders, both fitted with frictionless pistons, are filled with mixtures of He and Ar gases. In the first cylinder, the masses of He and Ar are m_1 and m_2 , respectively. In the second cylinder, the masses of He and Ar are m_2 and m_1 , respectively. The molar mass of Ar is 10 times the molar mass of He. The external pressure applied by the piston on the first cylinder needs to be 5 times that on the second cylinder so that the volume of the gas mixtures in both the cylinders are equal at the same temperature. Assuming He and Ar behave like ideal gases, the value of (m_1/m_2) is ____.

[JEE Advanced 2026 Paper 1]

Scan or tap for the
full solution



Space for Rough Work

JEE ADVANCED STATES OF MATTER — IDEAL GAS MIXTURES — PYQS

Test Pattern : **JEE (Advanced)**

ANSWER KEY

SECTION-B

[illegible]