AIPMT Pre.-2011

1. Two gases A and B having the same volume diffuse through a porous partition in 20 and 10 seconds respectively. The molecular mass of A is 49u. Molecular mass of B will be :-
(1) 50.00 u
(2) 12.25 u
(3) 6.50 u
(4) 25.00 u

AIPMT Pre. - 2012

2. 50 mL each of gas A and of gas B takes 150 and 200 seconds respectively for effusing through a pin hole under the similar condition. If molecular mass of gas B is 36, the molecular mass of gas A will be:
(1) 20.25   (2) 64   (3) 96   (4) 128

AIPMT Main - 2012

3. A certain gas takes three times as long to effuse out as helium. Its molecular mass will be :
(1) 64 u   (2) 9 u   (3) 27 u   (4) 36 u

NEET-UG 2013

4. Maximum deviation from ideal gas is expected from :
(1) $NH_3(g)$ (2) $H_2(g)$ (3) $N_2(g)$ (4) $CH_4(g)$

NEET(UG) 2018

5. Given van der Waal's constant for NH_3, H_2, O_2 and CO_2 are 4.17, 0.244, 1.36 and 3.59, L^2 atm mol^{-2} respectively which one of the following gases is most easily liquefied?
(1) NH_3 (2) H_2 (3) O_2 (4) CO_2

6. The correction factor 'a' to the ideal gas equation corresponds to
(1) density of the gas molecules
(2) volume of the gas molecules
(3) electric field present between the gas molecules
(4) forces of attraction between the gas molecules

NEET(UG) 2019

7. A gas at 350 K and 15 bar has molar volume 20 percent smaller than that for an ideal gas under the same conditions. The **correct** option about the gas and its compressibility factor (Z) is :
(1) Z > 1 and attractive forces are dominant
(2) Z > 1 and repulsive forces are dominant
(3) Z < 1 and attractive forces are dominant
(4) Z < 1 and repulsive forces are dominant

NEET(UG) (Odisha) 2019

8. The volume occupied by 1.8 g of water vapour at 374 °C and 1 bar pressure will be :-
[Use R = 0.083 bar L $K^{-1}mol^{-1}$]
(1) 96.66 L
(2) 55.87 L
(3) 3.10 L
(4) 5.37 L

9. In water saturated air, the mole fraction of water vapour is 0.02. If the total pressure of the saturated air is 1.2 atm, the partial pressure of dry air is :-
(1) 1.18 atm
(2) 1.76 atm
(3) 1.176 atm
(4) 0.98 atm

NEET (UG) 2020

10. A mixture of N_2 and Ar gases in a cylinder contains 7g of N_2 and 8g of Ar. If the total pressure of the mixture of gases in the cylinder is 27 bar, the partial pressure of N_2 is:
[Use atomic masses (in g mol^{-1}) : N = 14, Ar = 40]
(1) 18 bar
(2) 9 bar
(3) 12 bar
(4) 15 bar

NEET (UG) 2020 (Covid-19)

11. The minimum pressure required to compress 600 dm^3 of a gas at 1 bar to 150 dm^3 at 40°C is
(1) 4.0 bar
(2) 0.2 bar
(3) 1.0 bar
(4) 2.5 bar

12. Choose the correct option for graphical representation of Boyle's law, which shows a graph of pressure vs. volume of a gas at different temperatures:

(1)

(2)

(3)

(4)
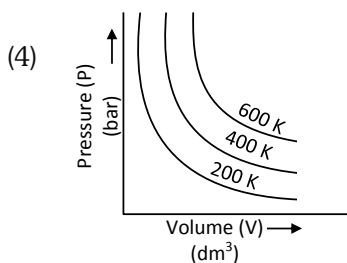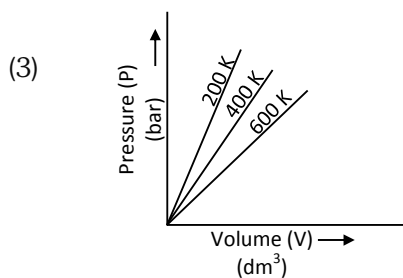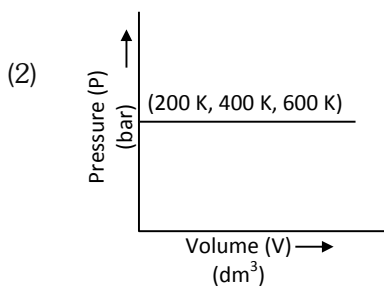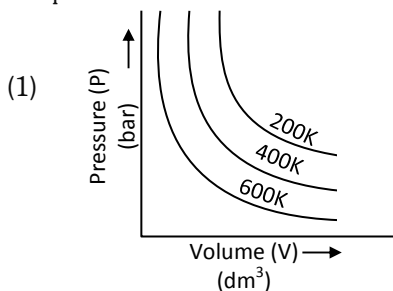
13. Choose the correct option for the total pressure (in atm.) in a mixture of 4 g O_2 and 2 g H_2 confined in a total volume of one litre at 0°C is:
[Given R = 0.082 L atm mol^{-1}K^{-1}, T=273K]
(1) 2.518
(2) 2.602
(3) 25.18
(4) 26.02

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	
Ans.	2	1	4	1	1	4	3	4	3	4	1	4	3	