



SMART TEST SERIES

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Name:		Subject:	Chemistry-11
Roll # :		Unit(s):	3,
Class:	Inter Part-I	Test:	Type 8 - Short Test (No Choice) - Marks=30
Date:		Time:	

Q.1 Circle the Correct Answers.

(6x1=6)

- Equal masses of methane and oxygen are mixed in an empty container at 25°C. The fraction of total pressure exerted by oxygen is:
(A) $\frac{1}{3}$ (B) $\frac{8}{9}$ (C) $\frac{1}{9}$ (D) $\frac{16}{17}$
- Partial pressure of oxygen in the air is:
(A) 156 torr (B) 157 torr (C) 158 torr (D) 159 torr
- The partial pressure of oxygen in lungs is:
(A) 760 torr (B) 320 torr (C) 159 torr (D) 116 torr
- Feeling uncomfortable breathing in un-pressurized cabins is due to:
(A) High pressure of CO₂ (B) Low Pressure of O₂ (C) Fatigue (D) Low pressure of CO₂
- The spreading of fragrance of a rose or scent in air is due to:
(A) Effusion (B) Diffusion (C) Osmosis (D) evaporation
- The molar volume of CO₂ in maximum at:
(A) S.T.P (B) 127° C and 1 atm (C) 0° C and 2 atm (D) 273° C and 2 atm

Q.2 Write short answers of the following questions.

(8x2=16)

- Derive Boyle's Law from Kinetic molecular theory of gases.
- Why the graph plotted between pressure and volume moves away from pressure axis at high temperature?
- What is the Charles's law? Which scale of temperature is used to verify that V/T = k (pressure and number of moles are constant)?
- Derive the units of "R" in general gas equation when the pressure is in atmosphere and volume in dm³.
- What is Avogadro's law of gases?
- Derive an expression to find out the partial pressure of gas.
- Give two causes for deviation of gases from ideality.
- Write down two characteristics of plasma.

NOTE: Attempt the long question.

(4+4=8)

- State and explain Boyle's Law and verify this Law by an experiment.
- 250cm³ of the sample of hydrogen effuses four times as rapidly as 250cm³ of unknown gas. Calculate the molar mass of unknown gas.