



SMART TEST SERIES

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Name:		Subject:	Chemistry-11
Roll # :		Unit(s):	3,
Class:	Inter Part-I	Test:	Type 3 - MCQs + SQs Test - Marks=30
Date:		Time:	

Q.1 Four possible answers A, B, C & D to each question are given. Circle the correct one. (10x1=10)

- If absolute temperature of the gas is doubled and the pressure is reduced to one half the volume of the gas will:
(A) Remains unchanged (B) Increase four times (C) Reduce to $\frac{1}{4}$ (D) be doubled
- Pressure remaining constant at which temperature the volume of a gas will become twice of water it is at 0°C :
(A) 546°C (B) 200°C (C) 546 K (D) 273 K
- Formula used for the conversion of F° into C° is:
(A) (B) $C^{\circ} = \frac{5}{9}[F^{\circ} - 32]$ (C) $F^{\circ} = \frac{5}{9}(C^{\circ}) + 32$ (D) $C^{\circ} = \frac{9}{5}[F^{\circ} - 32]$
- The unit millibar is commonly used by:
(A) Meteorologists (B) Astronauts (C) Engineers (D) Dalton
- The number of molecules in one dm^3 of water is close to:
(A) $\frac{6.02}{22.4} \times 10^{23}$ (B) $\frac{12.04}{22.4} \times 10^{23}$ (C) $\frac{18}{22.4} \times 10^{23}$ (D) $55.6 \times 6.02 \times 10^{23}$
- Vapour pressure of liquid depends upon:
(A) Amount of liquid (B) Surface area (C) Temperature (D) Size of container
- The spreading of fragrance of a rose or scent in air is due to:
(A) Effusion (B) Diffusion (C) Osmosis (D) evaporation
- The highest temperature at which a substance can exist as liquid at its critical pressure is:
(A) Absolute zero (B) Consulate temperature (C) Critical temperature
(D) Transition temperature
- The molar volume of CO_2 is maximum at:
(A) STP (0° and 1 atm) (B) 127°C and 1 atm (C) 0°C and 2 atm (D) 273°C and 2 atm
- 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) $\frac{16}{17}$

Q.2 Write short answers of the following questions. (10x2=20)

- Derive Boyle's Law from Kinetic molecular theory of gases.
- Convert 40°C into $^{\circ}\text{F}$.
- Define atmospheric pressure. Give its two units.
- Calculate the number of molecules and the number of atoms in 1 cm^3 of NH_3 at 100°C and pressure of 1.5atm.
- Derive Avogadro's Law from KMT of gases.
- Apply Dalton's Law of partial pressure to determine the partial pressure of a dry gas?
- Dalton's law of partial pressures is only obeyed by those gases which don't have attractive forces among their molecules. Explain it.
- State Graham's Law of diffusion and write its mathematical form.
- Write down four postulates of kinetic molecular theory of gases responsible for the deviation of gases from ideal behaviour.
- Derive molecular mass of a gas by general gas equation.