

CHEMISTRY-11	Chapter#03 (Complete) Test-2D		
	Name:	Class:	ID:
Date: / /	Marks Total: 30	Marks Obtained:	
Time Allowed: 50 Min.			

Maximum Marks: 06

(OBJECTIVE TYPE)

Time Allowed: 10 Min.

NOTE: Tick The Correct Option:

- Number of molecules in one dm^3 of water is close to:
 - $\frac{6.02}{22.4} \times 10^{23}$
 - $\frac{12.04}{22.4} \times 10^{23}$
 - $\frac{18}{22.4} \times 10^{23}$
 - $55.6 \times 6.02 \times 10^{23}$
- Which of the following will have highest rate of diffusion?
 - CO_2
 - NH_3
 - HCl
 - SO_2
- 1 atm is equal to:
 - 101325 torr
 - 101325 Pa
 - 101325 Nm^{-2}
 - Both 'b' & 'c'
- If the pressure on a gas is doubled, the density of the gas will become:
 - Double
 - Four times
 - Half
 - Same
- Kinetic equation was derived by:
 - Bernoulli
 - Maxwell
 - Clausius
 - Boltzmann
- The SI units of van der Waals constant 'a' are:
 - $\text{Nm}^{-4} \text{ mol}^{-2}$
 - $\text{Nm}^{-2} \text{ mol}^{-2}$
 - $\text{Nm}^{+4} \text{ mol}^{-2}$
 - $\text{Nm}^{+2} \text{ mol}^{-2}$

Maximum Marks: 24

(SUBJECTIVE TYPE)

Time Allowed: 40 Min.

SECTION-I

Q.2: Give brief answers to the following questions: (16)

- Define pressure. What is the SI unit of pressure?
- The graph between P and PV is a straight line. Explain why?
- What is R? What is its physical significance?
- Do you think that 1 mole of H_2 and 1 mole of NH_3 at 0°C and 1 atm pressure will have Avogadro's number of particles?
- Differentiate between diffusion and effusion.
- Polar gases have higher critical temperature than non-polar gases. Why?
- H_2 and He are ideal at room temperature but SO_2 and Cl_2 are non-ideal Explain.
- What is plasma.?

SECTION-II

NOTE: Attempt All Questions:

(08)

- Q.3:** A sample of nitrogen gas is enclosed in a vessel of volume 380 cm^3 at 120°C and pressure of 101325 Nm^{-2} . This gas is transferred to a 10 dm^3 flask and cooled to 127°C . Calculate the pressure in Nm^{-2} exerted by the gas at 27°C .
- Q.4:** One mole of methane gas is maintained at 300 K. Its volume is 250 cm^3 . Calculate the pressure exerted by the gas under the following conditions:
- When the gas is ideal.
 - When the gas is non-ideal. ($a = 2.253 \text{ atm dm}^6 \text{ mol}^{-2}$ $b = 0.0428 \text{ dm}^3 \text{ mol}^{-1}$)