CHEMISTRY-11	Chapter#03 (Complete) Test-3		
	Name:	Class:	ID:
Date: / /	**Marks Total: 40**	**Marks Obtained:**	
Time Allowed: 70 Min.			

Maximum Marks: 08 **(OBJECTIVE TYPE)** Time Allowed: 10 Min.

NOTE: Tick The Correct Option:

1. **If absolute temperature of a gas is doubled and the pressure is reduced to one half, the volume of the gas will be:**

   (a) Remain unchanged (b) Increase four times

   (c) Reduce to $\frac{1}{4}$ (d) Be doubled

2. **The deviation of gas form ideal behavior is maximum at:**

   (a) -10°C and 5.0 atm (b) -10°C and 2.0 atm (c) 100°C and 2.0 atm (d) 0°C and 2.0 atm

3. **Formula used for the conversion of °F into °C is:**

   (a) $^{\circ}F = 9/5(^{\circ}C) + 32$ (b) $^{\circ}F = 5/9(^{\circ}C) + 32$

   (c) $^{\circ}C = 5/9[^{\circ}F - 32]$ (d) $^{\circ}C = 9/5[^{\circ}F - 32]$

4. **Critical temperature of NH_3 is:**

   (a) 132.44°C (b) -132.44°C (c) 0°C (d) 136.25°C

5. **The independent variable in Boyle's law is:**

   (a) Temperature (b) Volume (c) Pressure (d) Quantity of gas

6. **How many Fahrenheit degrees are required to make the volume of a gas double of what is at 0°C?**

   (a) 273.160 (b) 523.480 (c) 459.570 (d) 491.690

7. **Which gas out of the following will have the slowest rate of diffusion?**

   (a) CH_4 (b) O_2 (c) Cl_2 (d) SO_2

8. **At low temperature, natural plasma can exist only in _____.**

   (a) Stars (b) Fluorescent bulbs

   (c) Vacuum (d) None

Maximum Marks: 32 **(SUBJECTIVE TYPE)** Time Allowed: 60 Min.

SECTION-I

Q.2: Give brief answers to the following questions: **(20)**

i. Define pressure. What is the SI unit of pressure?

ii. Explain that value of k in Boyle's law depends on: (a) Temperature (b) Quantity of gas.

iii. Do you think that the volume of any quantity of a gas becomes zero at –273.16°C? Is it not against the law of conservation of mass?

iv. Calculate the value of R in SI units.

v. 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?

vi. Differentiate between diffusion and effusion.

vii. Differentiate between mean square velocity and root mean square velocity.

viii. Derive Avogadro's law from KMT.

ix. Why H_2 and He cannot be liquefied by Linde's method?

x. Give important uses of plasma.

SECTION-II

NOTE: Attempt All Questions: **(12)**

Q.3: State Dalton's law of partial pressure and write its four applications.

Q.4: Give eight postulates of KMT (Kinetic Molecular Theory).

Q.5: Derive van der Waals equation for real gases and give the physical significance for van der Waals' constants 'a' & 'b'.