# CHEMISTRY-11

## Chapter#03 - Second Half (3.7 to 3.11) Test-3

Name: | Class: | ID:

Date: / / | Marks Total: **25** | Marks Obtained:
Time Allowed: 40 Min.

Maximum Marks: 09    **(OBJECTIVE TYPE)**    Time Allowed: 10 Min.

**NOTE:** Tick The Correct Option:

1. Gases deviate from ideal behavior at high pressure. Which of the followings is correct for non-ideality?
   (a) At high pressure, the gas molecules move in one direction only.
   (b) At high pressure, the collisions between the gas molecules are increased manifold.
   (c) At high pressure, the volume of the gas becomes insignificant.
   (d) At high pressure, the intermolecular attractions become significant.

2. Critical temperature of $NH_3$ is:
   (a) $132.44°C$    (b) $-132.44°C$    (c) $0°C$    (d) $136.25°C$

3. Maxwell:
   (a) Kinetic molecular theory    (b) Kinetic equation
   (c) Law of distribution of energies    (d) Law of distribution of velocities

4. $H_2O$ cannot exist as a liquid at:
   (a) $384.44°C$    (b) $304.3°C$    (c) $405.6K$    (d) $574.44 K$

5. Linde's method is based on:
   (a) Charles' law    (b) Graham's law of diffusion and effusion
   (c) Dalton's law of partial pressures    (d) Joule Thomson effect

6. The compressibility factor is:
   (a) $\dfrac{PV}{RT}$    (b) $\dfrac{PV}{T}$    (c) $\dfrac{PM}{dRT}$    (d) $\dfrac{PV}{nRT}$

7. At which temperature and pressure, the gas will deviate more from ideality?
   (a) $0°C$ and 1 atm    (b) $-100°C$ and 5 atm    (c) $100°C$ and 2 atm    (d) $273°C$ and 5 atm

8. The STP units of van der Waals constant 'a' are:
   (a) $atm\ dm^6\ mol^{-2}$    (b) $atm\ dm^{-6}\ mol^2$    (c) $atm\ dm^3\ mol^{-2}$    (d) $atm\ dm^{-3}\ mol^2$

9. Macroscopically, plasma is:
   (a) Negatively charged    (b) Positively charged
   (c) Neutral    (d) All

Maximum Marks: 16    **(SUBJECTIVE TYPE)**    Time Allowed: 30 Min.
## SECTION-I

**Q.2: Give brief answers to the following questions:**    (12)
  i. Derive Avogadro's law from KMT.
 ii. What is the importance of critical temperature for liquefaction of gases?
iii. Why $H_2$ and He cannot be liquefied by Linde's method?
 iv. Differentiate between an ideal and a real gas.
  v. $SO_2$ is comparatively non-ideal at 273 K but behaves ideally at 373 K.
 vi. What is plasma.?

## SECTION-II

**NOTE:** Attempt All Questions:    (04)

**Q.0: How volume and pressure were corrected by Van der Waals?**