# SHIKSHA CLASSES

**Subject : Chemistry**

**Class : XI**

## Question Paper

10 : States of Matter : Gaseous & Liquid States

**Total Marks :25**

**Time : 1 Hour**

### SECTION A

**Q.1 : Choose the correct option :**  4

i) Mathematically Boyle's low shown by all of the following except ................

  a) $PV = K$      b) $PT = K$

  c) $P_1V_1 = P_2V_2$      d) $V = K/P$

ii) Interactive forces are ………. in ideal gas.

  a) nil      b) small

  c) large

  d) same as that of real gases

iii) At constant temperature, when pressure is increase three times the volume ...............

  a) 3V      b) 3 V/2

  c) V/3      d) 2 V/5

iv) The unit of viscosity is

  a) dynes      b) newton

  c) gram      d) poise

**Q.2 : Answer the following :**  2

i) What is matter?

ii) Define : Polarizability

### SECTION B

**: Answer the following : (ANY 3)**  6

**Q.3 :** Explain London forces (or dispersion forces) with the help of suitable example.

**Q.4 :** How does hydrogen bonding influence boiling points and viscosity of compounds?

**Q.5 :** State and explain Charles' law in detail.

**Q.6 :** Derive the relation between molar mass and density (d) of a gas.

**Q.7 :** Write a short note on surface tension.

### Section C

**: Answer the following : (ANY 3)**  9

**Q.8 :** Distinguish between Ideal gas & Real gas.

**Q.9 :** A mixture of 28g $N_2$, 8g He and 40g Ne has 20 bar pressure, What is the partial pressure of each of these gases?

**Q.10 :** What is ideal gas equation ? derive it.

**Q.11 :** Give the corollary of Boyle's law.

**Q.12 :** Explain Ion-dipole interactions with the help of suitable example.

### SECTION D

**: Answer the following : (ANY 1)**  4

**Q.13 :** Write measurable properties of gaseous state .

**Q.14 :** Explain the properties of liquids with reference to :

i) Evaporation   ii) Boiling point   iii) Surface tension of liquid   iv) Viscosity of liquid

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