# Inter (Part-I) 2017

| Chemistry | Group-II | PAPER: I |
|---|---|---|
| Time: 20 Minutes | (OBJECTIVE TYPE) | Marks: 17 |

**Note:** Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

**1-1-** Equal masses of methane and oxygen are mixed in 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) $\frac{16}{17}$

**2-** Sum of $pK_a$ and $pK_b$ is equal to:

(a) 7      (b) 9

(c) 11      (d) 14 ✓

**3-** In order to mention the boiling point of water at 110°C, the external pressure should be:

(a) Between 760 torr and 1200 torr ✓

(b) 765 torr

(c) Between 200 torr and 760 torr

(d) 100 torr

**4-** Which of the following has linear structure:

(a) $CO_2$ ✓      (b) $NH_3$

(c) $CH_4$      (d) $H_2O$

**5-** The largest number of molecules are present in:

(a) 3.6 g of $H_2O$ ✓      (b) 4.8 g of $C_2H_5OH$

(c) 2.8 g of CO      (d) 5.4 g of $N_2O_5$

**6-** Splitting of spectral lines when atoms are subjected to electric field, called:

(a) Zeeman effect      (b) Stark effect ✓

(c) Photoelectric effect      (d) Compton effect

7- If rate equation of reaction $2A + B \rightarrow$ product is, rate $k[A]^2 [B]$, and A is present in large excess then order of reaction is:

(a) 1 √  (b) 2

(c) 3  (d) 4

8- The units of $K_c$ for reaction $N_2 + O_2 \rightleftharpoons 2NO$ will be:

(a) moles / $dm^3$  (b) $mole^{-1}$ / $dm^3$

(c) $mole^{-2} dm^{+6}$  (d) No unit √

9- The voltage of Nickel Cadmium Cell is:

(a) 1 V  (b) 1.2 V

(c) 1.4 V √  (d) 1.6 V

10- One mole of $SO_2$ contains:

(a) $6.02 \times 10^{23}$ atoms of oxygen.

(b) $18.1 \times 10^{23}$ molecules of $SO_2$.

(c) $6.02 \times 10^{23}$ atoms of sulphur. √

(d) $4.8 \times 10^{23}$ atoms of sulphur.

11- Bohr's model is contradicted by:

(a) Planck's theory

(b) Pauli's exclusion principle

(c) Heisenberg uncertainty principle √

(d) Hund's rule

12- Relative lowering of vapour pressure is equal to:

(a) Mole fraction of solute √

(b) Mole fraction of solvent

(c) Molarity

(d) Molality

13- Which of the following has bond angle of 120°:

(a) $BeCl_2$  (b) $BF_3$ √

(c) $CH_4$  (d) $NH_3$

14- For the reaction $NaOH + HCl \rightarrow NaCl + H_2O$, the change in enthalpy is called:

(a) Heat of reaction

(b) Heat of formation

(c) Heat of neutralization √

(d) Heat of combustion

15- **The partial pressure of oxygen in lungs is:**
 (a) 159 torr
 (b) 116 torr ✓
 (c) 100 torr
 (d) 90 torr

16- **Which of the following is pseudo solid:**
 (a) $CaF_2$
 (b) Glass ✓
 (c) $NaCl$
 (d) $KNO_3$

17- **Solvent extraction is an equilibrium process and controlled by:**
 (a) Law of mass action
 (b) Amount of solute used
 (c) Distribution law ✓
 (d) Hess's law