Inter (Part-I) 2017

Chemistry	Group-I	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- The voltage of Nickel Cadmium Cell is:

(a) 1 V (b) 1.2 V
(c) 1.4 V √ (d) 1.6 V

2- For which system does the equilibrium constant K_c has units of (concentration)$^{-1}$:

(a) $N_2 + 3H_2 \rightleftharpoons 2NH_3$ (b) $H_2 + I_2 \rightleftharpoons 2HI$
(c) $2NO_2 \rightleftharpoons N_2O_4$ √ (d) $2HF \rightleftharpoons H_2 + F_2$

3- If absolute temperature of a gas is doubled and the pressure is reduced one-half, the volume of a gas will:

(a) Remain unchanged (b) Increase four times √
(c) Reduce to $\frac{1}{4}$ (d) Be doubled

4- 18 g glocuse is dissolved in 90 g of water. The relative lowering of vapour pressure is equal to:

(a) $\frac{1}{5}$ (b) 5.1
(c) $\frac{1}{51}$ √ (d) 6

5- Orbitals having same energy are called:

(a) Hybrid orbitals (b) Valence orbitals
(c) Degenerate orbitals √ (d) d-orbitals

6- The cathodic reaction in the electrolysis of dil. H_2SO_4 with pt electrodes is:

(a) Reduction √
(b) Oxidation
(c) Both oxidation and reduction
(d) Neither oxidation or reducion

7- 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) Between 200 torr and 760 torr
(c) 765 torr
(d) Any value of pressure

8- The value occupied by 1.4 g of N_2 at STP is:

(a) 2.24 dm^3
(b) 22.4 dm^3
(c) 1.12 dm^3 √
(d) 112 cm^3

9- For a given process, the heat changes at constant pressure (q_p) and at constant volume (q_v) are related to each other as:

(a) $qp = q_v$
(b) $q_p < q_v$
(c) $q_p > q_v$ √
(d) $q_p = \frac{q_v}{2}$

10- Sum of pK_a and pK_b is equal to:

(a) 7
(b) 1
(c) 14 √
(d) 0

11- When 6d orbital is complete, the entering electron goes into:

(a) 7f
(b) 7s
(c) 7p √
(d) 7d

12- The comparative rates at which the solutes move in paper chromatography depend upon:

(a) The size of the paper.
(b) R_f values of solutes. √
(c) Temperature of the experiment.
(d) Size of the chromatographic tank used.

13- Diamond is a bad conductor because:

(a) It has a tight structure.
(b) It has a high density.
(c) There are no free electrons present in the crystal of diamond to conduct electricity. √
(d) Is transparent to light.

14- The deviation of a gas from ideal behaviour 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

15- **Which of the hydrogen halides has the highest percentage of ionic character:**

(a) HCl (b) HBr
(c) HF √ (d) HI

16- **The rate of reaction:**

(a) Increases as the reaction proceeds.
(b) Decreases as the reaction proceeds. √
(c) Remains the same as the reaction proceeds.
(d) May decrease or increase as the reaction proceeds.

17- **The number of moles of CO_2 which contain 8.0 g of oxygen:**

(a) 0.25 √ (b) 0.50
(c) 1.0 (d) 1.5