Roll No. of Candidate : _____

CHEMISTRY **(INTERMEDIATE PART - I) 321 - (III)** **Paper - I** **Group – II**

Time: 20 Minutes **OBJECTIVE ----- Code : 6486** **Marks: 17**

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank.

1. 1 - An excess of aqueous silver nitrate is added to aqueous barium chloride and precipitate is removed by filtration. What are the main ions in the filterate?

(A) Ag^{+} and NO_3^{-} only (B) Ag^{+} and Ba^{2+} and NO_3^{-}

(C) Ba^{2+} and NO_3^{-} only (D) Ba^{2+} and NO_3^{-} and $C\ell^{-}$

2 - Pressure remaining constant, at which temperature the volume of a gas will become twice of what it is at $0^{\circ}C$

(A) $546^{\circ}C$ (B) $200^{\circ}C$ (C) 546 K (D) 273 K

3 - The number of bonds in nitrogen molecule is

(A) one σ and one π (B) one σ and two π

(C) three sigma only (D) two σ and one π

4 - When water freezes at $0^{\circ}C$, its density decreases due to

(A) cubic structure of ice (B) empty spaces present in the structure of ice

(C) change of bond lengths (D) change of bond angles

5 - Isotopes differ in

(A) properties which depend upon mass

(B) arrangement of electrons in orbitals

(C) chemical properties

(D) the extent to which they may be affected in electromagnetic field

6 - 18 g glucose 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

7 - The nature of the positive rays depend on

(A) the nature of electrode (B) the nature of the discharge tube

(C) the nature of the residual gas (D) all of these

8 - The velocity of photon is

(A) independent of its wavelength (B) depends on its wavelength

(C) equal to square of its amplitude (D) depends on its source

9 - One calorie is equivalent to

(A) 0.4184 J (B) 41.84 J (C) 4.184 J (D) 418.4 J

10 - Acetone and chloroform are soluble in each other due to

(A) intermolecular hydrogen bonding (B) ion – dipole interaction

(C) instantaneous dipole (D) all of these

11 - Solvent extraction is an equilibrium process and it is controlled by

(A) law of mass action (B) the amount of solvent used

(C) distribution law (D) the amount of solute

12 - In zero order reaction, the rate is independent of

(A) temperature of reaction (B) concentration of reactants

(C) concentration of products (D) none of these

13 - Which of the following species has unpaired electrons in antibonding molecular orbitals?

(A) O_2^{2+} (B) N_2^{-2} (C) B_2 (D) F_2

14 - 27 g of $A\ell$ react completely with how much mass of O_2 to produce $A\ell_2O_3$

(A) 8 g of oxygen (B) 16 g of oxygen (C) 32 g of oxygen (D) 24 g of oxygen

15 - The cathodic reaction in electrolysis of dil. H_2SO_4 with Pt electrodes is

(A) reduction (B) oxidation

(C) both oxidation and reduction (D) neither oxidation nor reduction

16 - The molar volume of CO_2 is maximum at

(A) STP (B) $127^{\circ}C$ and 1 atm (C) $0^{\circ}C$ and 2 atm (D) $273^{\circ}C$ and 2 atm

17 - The pH of 10^{-3} mol dm^{-3} of an aqueous solution of H_2SO_4 is

(A) 3.0 (B) 2.7 (C) 2.0 (D) 1.5