CHEMISTRY   PAPER-I (OLD SCHEME)   TIME ALLOWED: 20 Minutes
GROUP-II   **OBJECTIVE**   MAXIMUM 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. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) One mole of SO_2 contains:-   (A) 6.02×10^{23} atoms of Oxygen

(B) 18.1×10^{23} molecules of SO_2 (C) 6.02×10^{23} atoms of Sulphur   (D) 4 grams of SO_2

(2) The volume occupied by 1.4g of N_2 at STP is:-

(A) $2.24\,dm^3$ (B) $22.4\,dm^3$ (C) $1.12\,dm^3$ (D) $11\,cm^3$

(3) Solvent extraction is an equilibrium process and is controlled by:-   (A) Law of mass action

(B) The amount of solvent used   (C) Distribution law   (D) The amount of solute

(4) Equal masses of Methane and Oxygen are mixed in an empty container at $25^o C$.

The fraction of total pressure exerted by Oxygen is:-   (A) $\frac{1}{3}$ (B) $\frac{8}{9}$ (C) $\frac{1}{9}$ (D) $\frac{16}{17}$

(5) The deviation of a gas from ideal behaviour is maximum at:-

(A) $-10^o C$ and 5.0 atm   (B) $-10^o C$ and 2.0 atm   (C) $100^o C$ and 2.0 atm   (D) $0^o C$ and 2.0 atm

(6) Acetone and Chloroform are soluble in each other due to:-   (A) Intermolecular Hydrogen Bonding

(B) Ion-dipole Interaction   (C) Instantaneous dipole   (D) Intramolecular Hydrogen Bonding

(7) Ionic solids are characterized by:-   (A) Low melting points

(B) Good conductivity in solid state   (C) High vapour pressure   (D) Solubility in Polar Solvents

(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) The wave number of the light emitted by a certain source is $2 \times 10^6\,m^{-1}$. The wavelength of this light will be:-   (A) $500\,nm$ (B) $500\,m$ (C) $200\,nm$ (D) $5 \times 10^7\,m$

(10) _____ species has unpaired electrons in antibonding molecular orbitals:-

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

(11) Dipole moment of H_2O is:-   (A) Zero D   (B) 1.85 D   (C) 2.20 D   (D) 0.95 D

(12) The net heat change in a chemical reaction is same, whether it is brought about in two or more different ways in one or several steps, it is known as:-

(A) Henry's Law   (B) Joule's Principle   (C) Hess's Law   (D) Law of conservation of energy

(13) 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

(14) Molarity of pure water is:-   (A) 1   (B) 18   (C) 55.5   (D) 6

(15) An azeotropic mixture of two liquids boils at a lower temperature than either of them when:-

(A) It is saturated   (B) It shows positive deviation from Raoult's Law

(C) It shows negative deviation from Raoult's Law   (D) It is Metastable

(16) _____ is not correct statement about galvanic cell.   (A) Anode is negatively charged

(B) Reduction occurs at anode   (C) Cathode is positively charged   (D) Reduction occurs at cathode

(17) 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