

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	Liquids which are practically immiscible : (A) $H_2O + C_6H_6$ (B) $H_2O + C_2H_5 - OH$ (C) $H_2O + HCl$ (D) $H_2O + CH_3 - O - CH_3$
2	The velocity of photon is : (A) Independent of its wavelength (B) Depend on its wavelength (C) Depend on its source (D) Depend upon its amplitude
3	The molar volume of $CO_2$ is maximum at : (A) S.T.P (B) $127^\circ C$ and 1 atm. (C) $0^\circ C$ and 2 atm. (D) $273^\circ C$ and 2 atm.
4	The type of hybridization in $BeCl_2$ is : (A) $sp^3$ (B) $sp^2$ (C) $sp$ (D) $dsp^2$
5	Splitting of spectral lines when atoms are subjected to strong electrical field is called : (A) Zeeman effect (B) Stark effect (C) Photoelectric effect (D) Compton effect
6	The volume occupied by 16 g of $CH_4$ at STP is : (A) $2.24 \text{ dm}^3$ (B) $22.414 \text{ dm}^3$ (C) $1.3 \text{ dm}^3$ (D) $1.8 \text{ dm}^3$
7	In zero order reaction, the rate is independent of : (A) Temperature of reaction (B) Concentration of reactants (C) Concentration of products (D) Nature of reactants
8	Hydrogen bonding is maximum in : (A) HI (B) HBr (C) HCl (D) $H_2O$
9	The pH of $10^{-3} \text{ mole dm}^{-3}$ of an aqueous solution of $H_2SO_4$ is : (A) 3.0 (B) 2.7 (C) 2.0 (D) 1.5
10	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 $N_2O_5$
11	The dipole moment of $CO_2$ is : (A) 0.95 D (B) 1.85 D (C) 1.61 D (D) 0 D
12	Which one of the following compound is purified by sublimation : (A) Benzoic acid (B) $SiO_2$ (C) $CS_2$ (D) NaI
13	The molal boiling point constant is the ratio of the elevation in boiling point to : (A) Molarity (B) Molality (C) Mole fraction of solute (D) Mole fraction of solvent
14	The term that is not state function : (A) Enthalpy (B) Internal energy (C) Work (D) Volume
15	The oxidation state of Mn in $KMnO_4$ is : (A) +7 (B) +6 (C) +2 (D) +5
16	The molecules of $CO_2$ in dry ice form the : (A) Ionic crystals (B) Covalent crystals (C) Molecular crystals (D) Metallic crystals
17	The unit millibar is commonly used by : (A) Meteorologists (B) Astronauts (C) Engineers (D) Dalton