

PAPER CODE = 6486

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 pH of $10^{-3} \text{ mol dm}^{-3}$ of an aqueous solution of H_2SO_4 is : (A) 3 (B) 2.7 (C) 2.0 (D) 1.5
2	Bond angles $\alpha = \gamma = 90^\circ$; $\beta \neq 90^\circ$ and axes $a \neq b \neq c$ is for crystal system : (A) Tetragonal (B) Hexagonal (C) Monoclinic (D) Triclinic
3	If the rate equation of a reaction $2A + B \rightarrow \text{Products}$ is, rate = $K[A]^2[B]$ and A is present in large excess, then order is : (A) 1 (B) 2 (C) 3 (D) Zero
4	Nickel has number of isotopes : (A) 3 (B) 5 (C) 7 (D) 2
5	pH of human blood is : (A) 7.35 (B) 6.35 (C) 5.35 (D) 4.35
6	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
7	Pressure remaining constant, at which temperature the volume of the gas will become twice of what it is at 0°C : (A) 546°C (B) 200°C (C) 546 K (D) 273 K
8	1 gram formula of NaCl is equal to : (A) 58.5 g (B) 23 g (C) 35.5 g (D) 12 g
9	18 g glucose is dissolved in 90 g of water, the relative lowering of vapour pressure is : (A) $\frac{1}{5}$ (B) 5.1 (C) $\frac{1}{51}$ (D) 6
10	de-Broglie equation is represented as : (A) $\lambda = \frac{h}{mv}$ (B) $m = \frac{h}{\lambda}$ (C) $m = \frac{h}{v}$ (D) $\lambda = \frac{2h}{mv}$
11	1-calorie is equivalent to : (A) 0.4184 J (B) 41.84 J (C) 418.4 J (D) 4.184 J
12	The temperature of a natural plasma is about : (A) 20000°C (B) 1000°C (C) 5000°C (D) 10000°C
13	Ionization energy for $\text{Mg} \rightarrow \text{Mg}^+ + 1e^-$ has $\Delta H = \text{---}$: (A) 738 KJ mol^{-1} (B) 238 KJ mol^{-1} (C) 448 KJ mol^{-1} (D) 138 KJ mol^{-1}
14	The velocity of photon is : (A) Independent of wavelength (B) Depends on wavelength (C) Equal to square of its amplitude (D) Depends on its source
15	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
16	Stronger the oxidizing agent, greater is the : (A) Oxidation potential (B) Reduction potential (C) Redox potential (D) E.M.F of cell
17	Which of the following is a pseudo solid : (A) CaF_2 (B) Glass (C) NaCl (D) All of these