



Q.No.1

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

S.#	Questions	A	B	C	D
1	Bohr model of atom is contradicted by:	Plank's quantum theory	Dual nature of matter	Heisenberg's uncertainty principle	All of these
2	Quantum number values for 2p orbitals are:	$n = 2, \ell = 1$	$n = 1, \ell = 2$	$n = 1, \ell = 0$	$n = 2, \ell = 0$
3	Which is a pseudo solid?	CaF_2	Glass	NaCl	All of these
4	Which is not an isomorphous pair?	$\text{NaNO}_3, \text{KNO}_3$	MgO and NaF	K_2SO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$	NaF and CaCl_2
5	Number of molecules in one dm^3 of water is close to:	$\frac{6.02}{22.4} \times 10^{23}$	$\frac{12.04}{22.4} \times 10^{23}$	$\frac{18}{22.4} \times 10^{23}$	$55.6 \times 6.02 \times 10^{23}$
6	Equal masses of methane and oxygen are mixed in an empty container at 25°C . The fraction of total pressure exerted by oxygen is:	$\frac{1}{3}$	$\frac{8}{9}$	$\frac{1}{9}$	$\frac{16}{17}$
7	The comparative rates at which the solutes move in paper chromatography depend on:	The size of paper	R_f values of solutes	Temperature of the experiment	Size of the chromatographic tank used
8	The ratio of actual yield to theoretical yield multiplied by 100 is called:	Complex yield	Experimental yield	%age yield	None of these
9	The calculation based on balanced chemical equation is called:	Complex calculation	Stoichiometric calculation	Non-stoichiometric calculation	None of these
10	The unit of the rate constant is the same as that of the rate of reaction in:	First order reaction	Second order reaction	Zero order reaction	Third order reaction
11	If the salt bridge is not used between two half cells, then voltage:	Decrease rapidly	Decrease slowly	Does not change	Drops to zero
12	The pH of buffers can be calculated by:	Henderson equation	Nerst equation	Kinetic equation	Arrhenius equation
13	Less soluble KClO_3 is precipitated from its solution by common ion effect on adding:	HCl	KCl	H_2S	NaCl
14	For which system does the equilibrium constant, K_c has units of $(\text{concentration})^{-1}$:	$\text{N}_2 + 3\text{H}_2 \rightleftharpoons 2\text{NH}_3$	$\text{H}_2 + \text{I}_2 \rightleftharpoons 2\text{HI}$	$2\text{NO}_2 \rightleftharpoons \text{N}_2\text{O}_4$	$2\text{HF} \rightleftharpoons \text{H}_2 + \text{F}_2$
15	If an endothermic reaction is allowed to take place very rapidly in the air, the temperature of the surrounding air:	Remains constant	Increases	Decreases	Remains unchanged
16	Octet rule is not followed in the formation of:	NF_3	CF_4	CCl_4	PCl_5
17	Which species has unpaired electrons in antibonding molecular orbitals?	O_2^+	N_2^-	B_2	F_2