

### Subject :: Chemistry

Q. No. 1 0022001	<b>Which of the following metals do not liberate hydrogen from dilute hydrochloric acid?</b>
Option A	Zn
Option B	Mg
Option C	Fe
Option D	Au
Correct Option	<b>D</b>

Q. No. 2 0022002	<b>Which one of the following is not an isotope?</b>
Option A	Tritium
Option B	Deuterium
Option C	Ortho Hydrogen
Option D	None of the above
Correct Option	<b>C</b>

Q. No. 3 0022003	<b>A solution of sodium metal in liquid ammonia is strongly reducing due to the presence of-</b>
Option A	Sodium atoms
Option B	Sodium Hydride
Option C	Sodium amide
Option D	Solvated electrons
Correct Option	<b>D</b>

Q. No. 4 0022004	<b>Rutherford's atomic model suggests the existence of-</b>
Option A	Atom
Option B	Nucleus
Option C	$\alpha$ - Particles
Option D	Mesons
Correct Option	<b>B</b>

Q. No. 5 0022005	<b>Which of the following represents the molarity of pure water-</b>
Option A	55.5
Option B	56.5
Option C	50.5
Option D	57.55

Correct Option	<b>A</b>
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Q. No. 6 0022006	<b>Pressure and solubility of a gas in solvent is established by ..... law.</b>
Option A	Raoult's law
Option B	Henry's law
Option C	Le chateliers principle
Option D	Osmotic law
Correct Option	<b>B</b>

Q. No. 7 0022007	<b>Polyethene is a polymer of-</b>
Option A	$C_2H_2$
Option B	$C_2H_4$
Option C	$C_2H_6$
Option D	$C_2H_5$
Correct Option	<b>B</b>

Q. No. 8 0022008	<b>Which of the following has maximum number of unpaired electrons?</b>
Option A	$Mg^{+2}$
Option B	$Ti^{+3}$
Option C	$V^{+3}$
Option D	$Fe^{+2}$
Correct Option	<b>D</b>

Q. No. 9 0022009	<b>Anisole is known as-</b>
Option A	Phenyl ether
Option B	Methyl phenyl ether and Methoxybenzene
Option C	Methoxy amide
Option D	None of these
Correct Option	<b>B</b>

Q. No. 10 0022010	<b>The standard reduction potential values of three metallic cations, X, Y, and Z are 0.52, -3.03, and -1.18 V respectively. The order of reducing power of the corresponding metal is-</b>
Option A	$Y > Z > X$
Option B	$X > Y > Z$
Option C	$Z > Y > X$
Option D	$Z > X > Y$
Correct	<b>A</b>

Option	
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Q. No. 11 0022011	<b>The impurity that is added externally to remove the impurity already present in the ore is known as-</b>
Option A	Flux
Option B	Matrix
Option C	Slag
Option D	Gangue
Correct Option	<b>A</b>

Q. No. 12 0022012	<b>The correct order of acidic strength is-</b>
Option A	$\text{Cl}_2\text{O}_7 > \text{SO}_2 > \text{P}_4\text{O}_{10}$
Option B	$\text{CO}_2 > \text{N}_2\text{O}_5 > \text{SO}_3$
Option C	$\text{Na}_2\text{O} > \text{MgO} > \text{Al}_2\text{O}_3$
Option D	$\text{K}_2\text{O} > \text{CaO} > \text{MgO}$
Correct Option	<b>A</b>

Q. No. 13 0022013	<b>Which species has the maximum number of lone pair of electrons on the central atom?</b>
Option A	$\text{ClO}_3^-$
Option B	$\text{XeF}_4$
Option C	$\text{SF}_4$
Option D	$\text{I}_3^-$
Correct Option	<b>D</b>

Q. No. 14 0022014	<b>The volume of 0.1M <math>\text{H}_2\text{SO}_4</math> required to neutralize completely 40 mL of 0.2M NaOH solution is-</b>
Option A	10 mL
Option B	40 mL
Option C	20 mL
Option D	80 mL
Correct Option	<b>B</b>

Q. No. 15 0022015	<b>3.65 gms of HCl is dissolved in 16.2 gm of water. The mole fraction of HCl in the resulting solution is-</b>
Option A	0.4
Option B	0.3
Option C	0.2
Option D	0.1
Correct Option	<b>D</b>

Q. No. 16 0022016	<b>The phenomenon in which adsorption and absorption takes place simultaneously is called-</b>
Option A	Desorption
Option B	Adsorption
Option C	Sorption
Option D	None of these
Correct Option	<b>C</b>

Q. No. 17 0022017	<b>A dispersion of AgCl in water is-</b>
Option A	Hydrophilic Colloid
Option B	An emulsion
Option C	An alcohol
Option D	Hydrophobic solution
Correct Option	<b>B</b>

Q. No. 18 0022018	<b>FeSO<sub>4</sub> forms brown ring with</b>
Option A	NO <sub>2</sub>
Option B	N <sub>2</sub> O <sub>3</sub>
Option C	NO
Option D	N <sub>2</sub> O <sub>5</sub>
Correct Option	<b>C</b>

Q. No. 19 0022019	<b>Molecular formula of Glauber's salt is-</b>
Option A	MgSO <sub>4</sub> .7H <sub>2</sub> O
Option B	Na <sub>2</sub> SO <sub>4</sub> .10H <sub>2</sub> O
Option C	CuSO <sub>4</sub> .5H <sub>2</sub> O
Option D	FeSO <sub>4</sub> .7H <sub>2</sub> O
Correct Option	<b>B</b>

Q. No. 20 0022020	<b>Which type of molecules form micelles?</b>
Option A	Non polar molecules
Option B	Polar molecules
Option C	Surfactant Molecules
Option D	Any of the above
Correct Option	<b>C</b>

Q. No. 21 0022021	<b>Which of the following is used for galvanizing ion?</b>

Option A	Cr
Option B	Zn
Option C	Ni
Option D	Sn
Correct Option	<b>B</b>

Q. No. 22 0022022	<b>Chief air pollutant which is likely to deplete ozone layer is-</b>
Option A	Sulphur dioxide
Option B	Sulphur trioxide
Option C	Carbon dioxide
Option D	Nitrogen oxide and chloro fluorocarbons
Correct Option	<b>D</b>

Q. No. 23 0022023	<b>If 0.30 mole of zinc are added to 0.52 mole of HCl, the moles of H<sub>2</sub> formed are-</b>
Option A	0.52
Option B	0.60
Option C	0.30
Option D	0.26
Correct Option	<b>D</b>

Q. No. 24 0022024	<b>The equivalent mass of Fe in FeO is</b>
Option A	56
Option B	36
Option C	28
Option D	18.66
Correct Option	<b>C</b>

Q. No. 25 0022025	<b>The principal quantum number, n describes-</b>
Option A	Shape of orbital
Option B	Sub-shell of electron
Option C	Main energy shell of electron
Option D	Spin of electron
Correct Option	<b>C</b>

Q. No. 26 0022026	<b>Which of the following compounds has isopropyl group?</b>
Option A	2, 2, 3, 3- tetramethyl pentane
Option B	2, 2- dimethyl pentane

Option C	2- Methyl pentane
Option D	2, 2, 3- tetramethyl pentane
Correct Option	<b>C</b>

Q. No. 27 0022027	<b>Identify the correct order of reactivity in electrophilic substitution reaction of the following compounds- A. Benzene B. Toluene C. Chlorobenzene D. Nitrobenzene</b>
Option A	A > B > C > D
Option B	D > C > B > A
Option C	B > A > C > D
Option D	B > C > A > D
Correct Option	<b>C</b>

Q. No. 28 0022028	<b>Which of the following halides is least stable and has doubtful existence?</b>
Option A	$\text{CCl}_4$
Option B	$\text{GeI}_4$
Option C	$\text{SnI}_4$
Option D	$\text{PbI}_4$
Correct Option	<b>D</b>

Q. No. 29 0022029	<b>The outermost electronic configuration of manganese (Atomic No. = 25) is-</b>
Option A	$3d^5 4s^2$
Option B	$3d^6 4s^2$
Option C	$3d^6 4s^1$
Option D	$3d^7 4s^0$
Correct Option	<b>A</b>

Q. No. 30 0022030	<b>Which of the following molecules will have polar bonds but zero dipole moments?</b>
Option A	$\text{NF}_3$
Option B	$\text{SF}_4$
Option C	$\text{F}_2$
Option D	$\text{CF}_4$
Correct Option	<b>D</b>

Q. No. 31 0022031	<b>In a double bond connecting two atoms there is a sharing of-</b>
Option A	2 electrons
Option B	4 electrons
Option C	1 electrons

Option D	All electrons
Correct Option	<b>B</b>

  

Q. No. 32 0022032	<b>For a non-electrolytic solution, vanthoff factor is equal to-</b>
Option A	0
Option B	1
Option C	Between 0 and 1
Option D	2
Correct Option	<b>C</b>

  

Q. No. 33 0022033	<b>Isotonic solutions have same</b>
Option A	Molar concentration
Option B	Molality
Option C	Normality
Option D	None of these
Correct Option	<b>A</b>

  

Q. No. 34 0022034	<b>Which of the following is a basic dye?</b>
Option A	Congo red
Option B	Cellition fast blue 'B'
Option C	Aniline yellow
Option D	None of the above
Correct Option	<b>C</b>

  

Q. No. 35 0022035	<b>Arsenic drug are mainly used in the treatment of-</b>
Option A	Jaundice
Option B	Typhoid
Option C	Syphilis
Option D	Cholera
Correct Option	<b>C</b>

  

Q. No. 36 0022036	<b>The substance applied to fabrics before dying them is called-</b>
Option A	Mordant
Option B	Chromatophore
Option C	Indigo
Option D	Anthocyanins
Correct	<b>A</b>

Option	
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Q. No. 37 0022037	<b>Which of the following bonds have lowest bond energy?</b>
Option A	C-Cr
Option B	N-N
Option C	H-H
Option D	O-O
Correct Option	<b>D</b>

Q. No. 38 0022038	<b>Which one is appreciably soluble in water?</b>
Option A	CS <sub>2</sub>
Option B	C <sub>2</sub> H <sub>5</sub> OH
Option C	CCl <sub>4</sub>
Option D	CHCl <sub>3</sub>
Correct Option	<b>B</b>

Q. No. 39 0022039	<b>The percentage of carbon in steel is approximately-</b>
Option A	1 %
Option B	10 %
Option C	3 %
Option D	2 %
Correct Option	<b>D</b>

Q. No. 40 0022040	<b>Extraction of silver from commercial lead is possible by-</b>
Option A	Mond's process
Option B	Haber's process
Option C	Parke's process
Option D	Clarke's process
Correct Option	<b>C</b>

Q. No. 41 0022041	<b>Considering the elements B, Al, Mg and K, the correct order of their metallic character is-</b>
Option A	Al > Mg > B > K
Option B	B > Al > Mg > K
Option C	K > Mg > Al > B
Option D	Mg > Al > K > B
Correct Option	<b>C</b>

Q. No. 42	<b>The relationship between C<sub>p</sub> and C<sub>v</sub> for an ideal gas is-</b>
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0022042	
Option A	$C_p - C_v = 2R$
Option B	$C_p + C_v = R$
Option C	$C_p C_v = R$
Option D	$C_p - C_v = R$
Correct Option	<b>D</b>

Q. No. 43 0022043	<b>Which one of the following is a colligative property?</b>
Option A	Surface Tension
Option B	Osmotic Pressure
Option C	Viscosity
Option D	Refractive Index
Correct Option	<b>B</b>

Q. No. 44 0022044	<b>Clouds represent an example of dispersion of</b>
Option A	Gas in solid
Option B	Solid in gas
Option C	Gas in gas
Option D	Liquid in gas
Correct Option	<b>D</b>

Q. No. 45 0022045	<b>Metals like silver and copper can be obtained in the colloidal state by-</b>
Option A	Precipitation
Option B	Bredig's Arc method
Option C	Dialysis
Option D	Coagulation
Correct Option	<b>B</b>

Q. No. 46 0022046	<b>The metallic luster exhibited by sodium is explained by-</b>
Option A	Diffusion of sodium ions
Option B	Oscillation of loose electrons
Option C	Excitation of free protons
Option D	Existence of body centered cubic lattice
Correct Option	<b>B</b>

Q. No. 47 0022047	<b>Classical smog occurs in place of-</b>
Option A	Excess $SO_2$

Option B	Low temperature
Option C	High temperature
Option D	Excess NH <sub>3</sub>
Correct Option	<b>B</b>

Q. No. 48 0022048	<b>A compound possesses 8 % sulphur by mass. The least molecular mass is-</b>
Option A	200
Option B	400
Option C	155
Option D	355
Correct Option	<b>B</b>

Q. No. 49 0022049	<b>The number of electrons in the M shell of the element with atomic number 24 is-</b>
Option A	24
Option B	12
Option C	8
Option D	13
Correct Option	<b>D</b>

Q. No. 50 0022050	<b>..... is a ferromagnetic substance.</b>
Option A	Fe <sub>3</sub> O <sub>4</sub>
Option B	KMnO <sub>4</sub>
Option C	Co
Option D	NaCl
Correct Option	<b>C</b>

