

Subject :: Chemistry

Q. No. 1 0021001	Coordinate number of atom in a cubic closed packed structure is
Option A	10
Option B	11
Option C	12
Option D	13
Correct Option	C

Q. No. 2 0021002	Efficiency of packing in case of a metal crystal for simple cubic lattice is
Option A	52.4%
Option B	70%
Option C	30.2%
Option D	80.2%
Correct Option	A

Q. No. 3 0021003	Compound which is highly soluble in water is
Option A	Formic Acid
Option B	Phenol
Option C	Chloroform
Option D	Toluene
Correct Option	A

Q. No. 4 0021004	Charge required for reduction of 1 mol of Al^{3+} to Al is
Option A	193000 C
Option B	250000 C
Option C	289500 C
Option D	359500 C
Correct Option	C

Q. No. 5 0021005	Powdered substances are more effective adsorbent than crystalline forms because of
Option A	Surface tension
Option B	Surface area
Option C	Viscosity
Option D	Shear stress
Correct Option	B

Q. No. 6	The process of converting sulphide ores into its metallic oxides by heating
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0021006	strongly below its melting point in presence of air is called
Option A	Roasting
Option B	Calcination
Option C	Chromatography
Option D	Zone Refining
Correct Option	A

Q. No. 7 0021007	N₂ is less reactive at room temperature, due to presence of
Option A	Single bond between two N-atom
Option B	Double bond between two N-atom
Option C	Triple bond between two N-atom
Option D	No bond between two N-atom
Correct Option	C

Q. No. 8 0021008	Element which does not react with oxygen directly is
Option A	Fe
Option B	Pt
Option C	Ti
Option D	Zn
Correct Option	B

Q. No. 9 0021009	When sulphur dioxide is passed through an aqueous solution of Fe(III) salt, then
Option A	It reduces aqueous solution of Fe(III) salt to Fe(II) salt
Option B	It remain same
Option C	It oxidized the aqueous solution of Fe(III)
Option D	Endothermic reaction occur
Correct Option	A

Q. No. 10 0021010	pH value of vinegar is
Option A	3
Option B	0
Option C	7
Option D	12
Correct Option	A

Q. No. 11 0021011	Most common oxidation state of lanthanoids is
Option A	+1
Option B	+2
Option C	+3
Option D	+4

Correct Option	C
Q. No. 12 0021012	Last element in the series of the actinoids is
Option A	Lawrencium
Option B	Berkelium
Option C	Curium
Option D	Americium
Correct Option	A
Q. No. 13 0021013	Chemical formula of Iron(III) Hexacyanoferrate(II) coordination compound is
Option A	$\text{Fe}_4[\text{Fe}(\text{CN})_6]_3$
Option B	$\text{Fe}_2[\text{Fe}(\text{CN})_6]_2$
Option C	$\text{K}_2[\text{Ni}(\text{CN})_4]$
Option D	$\text{Fe}_3[\text{Ni}(\text{CN})_6]_3$
Correct Option	A
Q. No. 14 0021014	IUPAC name of $[\text{Pt}(\text{NH}_3)_2\text{Cl}(\text{NH}_2\text{CH}_3)]\text{Cl}$ is
Option A	Potassium tetrachloride
Option B	Potassium hexacyanoferrate(III)
Option C	Diamminechloride(methylamine) platinum (II) chloride
Option D	Hexaamminecobalt(III) chloride
Correct Option	C
Q. No. 15 0021015	Type of isomerism exhibit by $[\text{Pt}(\text{NH}_3)(\text{H}_2\text{O})\text{Cl}_2]$ is
Option A	Geometric isomerism
Option B	Ionization isomerism
Option C	Linkage isomerism
Option D	Optical isomerism
Correct Option	A
Q. No. 16 0021016	The overall complex dissociation equilibrium constant for $\text{Cu}(\text{NH}_3)_4^{2+}$ ion (β_4 for this complex is 2.1×10^{13}) is
Option A	3×10^{12}
Option B	4.7×10^{-14}
Option C	3.7×10^{-14}
Option D	2.7×10^{-14}
Correct Option	B
Q. No. 17 0021017	Ions produced from the complex $\text{Co}(\text{NH}_3)_6\text{Cl}_2$ when dissolved in liquid are

Option A	4
Option B	5
Option C	3
Option D	7
Correct Option	C

Q. No. 18 0021018	IUPAC name of $\text{CH}_3\text{CH}=\text{CHC}(\text{Br})(\text{CH}_3)_2$ is
Option A	4-Bromo-4-methylpent-2-ene
Option B	1-bromo-2-methylpent-1-ene
Option C	3-chloro-3-methylpentane
Option D	2-bromo-3-methylbutane
Correct Option	A

Q. No. 19 0021019	Nucleophile which can attack through two different sites are called
Option A	Ambident nucleophile
Option B	External nucleophile
Option C	Internal nucleophile
Option D	Tertiary nucleophile
Correct Option	A

Q. No. 20 0021020	Which one has highest boiling point
Option A	Pentan-1-ol
Option B	Methanol
Option C	ethanol
Option D	propan-1-ol
Correct Option	A

Q. No. 21 0021021	In RNA pyrimidine bases are
Option A	Cytosine and thymine
Option B	Guanine and adenine
Option C	Cytosine and uracil
Option D	Guanine and adenine
Correct Option	C

Q. No. 22 0021022	Water soluble vitamin is
Option A	Vitamin A
Option B	Vitamin D
Option C	Vitamin K
Option D	Vitamin C
Correct Option	D

Q. No. 23 0021023	Which of the following option is not an example of linear polymer
Option A	HDPE
Option B	PVC
Option C	Bakelite
Option D	Nylon
Correct Option	C

Q. No. 24 0021024	Tincture of iodine is
Option A	Artificial sweetener
Option B	Food preservatives
Option C	Antiseptic
Option D	Antibiotic
Correct Option	C

Q. No. 25 0021025	Which of the following is not an artificial sweetening agent
Option A	Saccharin
Option B	Aspartame
Option C	Alitame
Option D	Sodium benzoate
Correct Option	D

Q. No. 26 0021026	How much copper can be obtained from 100 g of copper sulphate (CuSO₄)? [atomic mass of Cu=63.5 a.m.u]
Option A	39.81 g
Option B	60.55 g
Option C	11.01 g
Option D	1.09 g
Correct Option	A

Q. No. 27 0021027	16 g of oxygen has same number of molecule as in
Option A	16 g of CO
Option B	28 g of N ₂
Option C	14 g of N ₂
Option D	25 g of H ₃
Correct Option	C

Q. No. 28 0021028	The total number of electron present in 1.6 g of methane is
Option A	6.022×10^{23}
Option B	7.022×10^{23}

Option C	6.022×10^{25}
Option D	7.022×10^{22}
Correct Option	A

Q. No. 29 0021029	Electronic configuration of Fe^{3+} ion is
Option A	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^5$
Option B	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^4$
Option C	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^3$
Option D	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^2$
Correct Option	A

Q. No. 30 0021030	Gas responsible for damage in ozone layer is
Option A	Oxygen
Option B	Hydrogen
Option C	Chlorofluorocarbon
Option D	Nitrogen
Correct Option	C

Q. No. 31 0021031	The energy needed to remove a single electron (most loosely bound) from isolated gaseous atom is called
Option A	Ionization energy
Option B	Electronegativity
Option C	Kinetic energy
Option D	Electron affinity
Correct Option	A

Q. No. 32 0021032	The size of isoelectronic species F^-, Ne and Na^+ is affected by
Option A	Nuclear charge (Z)
Option B	Electron - electron interaction in the outer orbital
Option C	Valence principal quantum number (n)
Option D	Neutron particle
Correct Option	A

Q. No. 33 0021033	The element in which electrons are progressively filled in 4f orbital are called
Option A	Actinoids
Option B	Transition elements
Option C	Lanthanoids
Option D	Halogens
Correct Option	C

Q. No. 34 0021034	The correct order of following gases according to their chemical reactivity in term of oxidizing property is
Option A	F>Cl>O>N
Option B	F>O>Cl>N
Option C	Cl>F>O>N
Option D	O>F>N>Cl
Correct Option	B

Q. No. 35 0021035	According to VSEPR model , bond pair and shape of SiCl₄ molecule is
Option A	5 bond pair and linear
Option B	1 bond pair and triangular planar
Option C	4 bond pair and tetrahedral
Option D	3 bond pair and trigonal bipyramidal
Correct Option	C

Q. No. 36 0021036	Which Hybrid orbitals are used by carbon atom in CH₃-CH₃ molecule
Option A	Both C atom use sp ³ hybrid orbital
Option B	C ₁ = sp ³ and C ₂ = sp ²
Option C	C ₁ = sp ² and C ₂ = sp ³
Option D	Both C atom use sp ² hybrid orbital
Correct Option	A

Q. No. 37 0021037	Bond order of N₂ is
Option A	2
Option B	3
Option C	4
Option D	5
Correct Option	B

Q. No. 38 0021038	The minimum pressure required to compress 500 dm³ of air (at 1 bar) to 200 dm³ at 30° C is
Option A	2.5 bar
Option B	10 bar
Option C	1 bar
Option D	5 bar
Correct Option	A

Q. No. 39 0021039	The effect of temperature on the vapour pressure of a liquid is
Option A	Vapour pressure increases with rise in temperature
Option B	Vapour pressure decrease with rise in temperature
Option C	Vapour pressure remain constant with rise in temperature

Option D	Vapour pressure increases with decrease in temperature
Correct Option	A

Q. No. 40 0021040	In a process 701 J of heat is absorbed and 394 J of work is done by a system then the change in the internal energy for the process is
Option A	300 J
Option B	200 J
Option C	350 J
Option D	307 J
Correct Option	D

Q. No. 41 0021041	An isochoric process take place at constant
Option A	Temperature
Option B	Pressure
Option C	Volume
Option D	Concentration
Correct Option	C

Q. No. 42 0021042	If the concentration of hydrogen ion in a sample of soft drink is $3.8 \times 10^{-3} \text{ M}$ then the pH value is
Option A	5.23
Option B	3.42
Option C	2.42
Option D	1.72
Correct Option	C

Q. No. 43 0021043	Conjugate acid and conjugate base of H_2O are
Option A	Conjugate acid is H_2O^+ and Conjugate base is OH^+
Option B	Conjugate acid is H_3 and Conjugate base is OH^+
Option C	Conjugate acid is O^+ and Conjugate base is O^-
Option D	Conjugate acid is H_3O^+ and Conjugate base is OH^-
Correct Option	D

Q. No. 44 0021044	Which element neither exhibit -ve nor +ve oxidation state?
Option A	Cs
Option B	Ne
Option C	I
Option D	F
Correct Option	B

Q. No. 45	What is the oxidation number of P in H_3PO_4
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0021045	
Option A	3
Option B	4
Option C	5
Option D	6
Correct Option	C

Q. No. 46 0021046	What is the mass ratio of hydrogen isotopes?
Option A	1:2:4
Option B	1:3:2
Option C	2:1:3
Option D	1:2:3
Correct Option	D

Q. No. 47 0021047	Which type of hydrides are non-stoichiometric in nature?
Option A	Interstitial hydrides
Option B	Ionic hydrides
Option C	Covalent hydrides
Option D	Carbon hydrides
Correct Option	A

Q. No. 48 0021048	Which of the following element has least melting point
Option A	Na
Option B	K
Option C	Rb
Option D	Cs
Correct Option	D

Q. No. 49 0021049	Which of the following is used in photoelectric cell?
Option A	Na
Option B	Li
Option C	Cs
Option D	K
Correct Option	C

Q. No. 50 0021050	Thermodynamically most stable form of carbon is
Option A	Diamond
Option B	Graphite
Option C	Coal
Option D	Fullerene

Correct
Option

B

