Q-1 - NEET 2019 - CHEMISTRY

For the cell reaction:

$2Fe^{3+}(aq) + 2l^{-}(aq) \rightarrow 2Fe^{2+}(aq) + l_2(aq)$

$E^{?}_{cell} = 0.24V$ at $298K$. The rstandard gibbs energy $\left(\triangle , G^{?} \right)$ of the cell reaction is

[Given that faraday constnat $F = 96400Cmol^{-1}$]

(A) $23.16kJmol^{-1}$

(B) $-46.32kJmol^{-1}$

(C) $-23.16kJmol^{-1}$

(D) $46.32kJmol^{-1}$

Correct Option : B

SOLUTION

The standard gibb's energy $(\triangle, G) = -nFE^{?}_{cell}$

Value of n=2

$$\triangle G = -2 \times 96500 \times 0.24 = -46321J$$
$$= -46.32kJ$$

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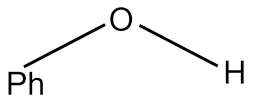
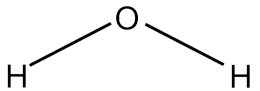
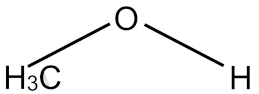
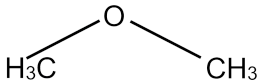
Q-2 - NEET 2019 - CHEMISTRY

The compound that is most difficult protonate is

(A) (1) 

(B) (2) 

(C) (3) 

(D) (4) 

Correct Option : A

SOLUTION

$Ph - \ddot{\underset{\cdot\cdot}{O}} - H \rightarrow$ lone pair of oxygen in conjugation so less basic and difficult to protonated (phenol)

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Q-3 - NEET 2019 - CHEMISTRY

The magnitude and permanganate ions are tetrahedral due to

(A) The π- bonding involves overlap of d-orbitals of oxygen with d-orbitals of manganese.

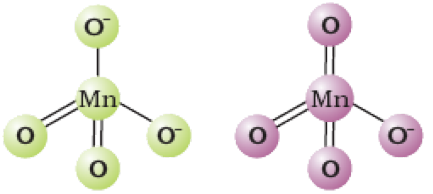
(B) The $\pi -$ bonding involves overlap of p-orbitals of oxygen with d-orbitals of mangenese.

(C) There is no $\pi -$ bonding

(D) The $\pi -$ bonding involves overlap of p-orbitals of oxygen with p-orbitals of mangenese.

Correct Option : B

SOLUTION



Tetrahedral manganate (green) ion

Tetrahedral permanganate (purple) ion

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Q-4 - NEET 2019 - CHEMISTRY

The correct order of the basic strength of methyl substituted amines in aqueous solution is

(A) $CH_3NH_2 > (CH_2)_2NH > (CH_3)_3N$

(B) $(CH_3)_2NH > CH_3NH_2 > (CH_3)_3N$

(C) $(CH_3)_3N > CH_3NH_2 > (CH_3)_2NH$

(D) $(CH_3)_3N > (CH_3)_2NH > CH_3NH_2$

Correct Option : B

SOLUTION

K_b of methyl substituted amines in auous solution depend upon combined effect of $+l$ of methyl and solubility in H_2O by H-bonding and order is

$K_b(CH_3)_2NH > CH_3 - NH_2 > (CH_3)_3N$

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Q-5 - NEET 2019 - CHEMISTRY

An alkene "A" on reaction with O_3 and Zn gives propanone and ethanol in equimolar Addition of HCl to alkene "A" gives "B" as the product. The structure of product "B" is:

(A) $H_3C - \underset{\underset{Cl}{|}}{CH} - \overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{CH}}$

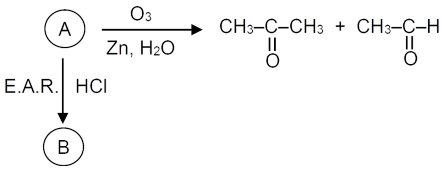
(B) $Cl - CH_2 - CH_2 - \overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{CH}}$

(C) (3) $H_3C - CH_2 - \overset{\overset{CH_2Cl}{|}}{CH} - CH_3$

(D) $H_3C - CH_2 - \overset{\overset{CH_3}{|}}{\underset{\underset{Cl}{|}}{C}} - CH_3$

Correct Option : D

SOLUTION



$A = CH_3 - \underset{\underset{CH_3}{|}}{C} = CH - CH_3$

$$B = CH_3 - \underset{\underset{CH_3}{|}}{\overset{\overset{Cl}{|}}{C}} - CH_2 - CH_3$$

Formation of B from A is markonikoff rule addition by E.A.R mechanism

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Q-6 - NEET 2019 - CHEMISTRY

For the second period elements the correct increasing order of first io0nization enthalpy is:

(A) $Li < Bt < B < C < O < N < F < Ne$

(B) $Li < Be < B < C < N < O < F < Ne$

(C) $Li > B < Be < C < O < N < F < Ne$

(D) $Li < B < Be < C < N < O < F < Ne$

Correct Option : C

SOLUTION

Li $\boxed{\text{Be} > \text{B}}$ C $\boxed{\text{N} > \text{O}}$ F Ne

L IP ↑

Correct order of IP

$$Ne < F < N < O < C < Be < B < Li$$

So, Answer is (3)

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Q-7 - NEET 2019 - CHEMISTRY

A gas at 350 K and 15 bar has molar volume 20 percent smaller than that for an ideal gas under the same conditions. The correct option above the gas and its compressibility factor (Z) is :

(A) Z lt 1 and repulsive forces are dominant

(B) Z gt 1 and attractive forces are dominant.

(C) Z gt 1 and repulsive forces are dominant.

(D) Z lt 1 and attractive forces are dominant

Correct Option : D

SOLUTION

$V_i = V$, ltrgt $V_r = V - 0.2V = 0.8V$

if value of Zlt1 then attractive forces are dominant,

$$\left(Z = \frac{V_r}{V_i} = 0.8\right)$$

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Q-8 - NEET 2019 - CHEMISTRY

For a cell involving one electron $E^0_{cell} = 0.59V$ and 298K, the equilibrium constant for the cell reaction is:

[Given that $\frac{2.303RT}{F} = 0.059V$ at $T = 298K$]

(A) 1.0×10^{30}

(B) 1.0×10^{2}

(C) 1.0×10^5

(D) 1.0×10^{10}

Correct Option : D

SOLUTION

Nearest equation

$$E_{cell}^{?} = E_{cell}^{?} \frac{-0.059}{n} \log Q_C$$

At equilibrium Ecell $= 0, Q_C = K_C$

$$E_{cell}^{?} = \frac{-0.059}{n} \log K_C \quad \text{Value of} \quad E_{cell}^{?} = 0.59V$$

$$0.59 = \frac{0.059}{1} \log K_C \quad \text{value of} \quad n = 1$$

$$K_C = \text{antilog} \quad 10$$

$$K_C = 1 \times 10^{10}$$

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Q-9 - NEET 2019 - CHEMISTRY

Which will make basic buffer?

(A) 100 mL of 0.1 M HCl + 100 mL of 0.1 M NaOH

(B) 50 mL of 0.1 M NaOH + 25 mL of 0.1 M CH_3COOH

(C) 100 mL of 0.1 M CH_3COOH + 100 mL of 0.1 M NaOH

(D) 100 mL of 0.1 M HCl + 200 mL of 0.1 M NH_4OH

Correct Option : D

SOLUTION

Acid-base titration

$$\underset{10\text{ m mole}}{HCl} + \underset{\substack{20\text{ m mole} \\ 20-10}}{Na_4OH} \rightarrow \underset{10\text{ m mole}}{Na_4Cl}$$

HCl is limiting reagent

Solution contain $\underset{(WB)}{NH_4OH} \& \underset{(SAWB)}{NH_4Cl}$

The basic buffer will form

WATCH VIDEO SOLUTION ON DOUBTNUT

Which is the correct thermal stability order of

$H_2E(E = O, S, Se, Te$ and $Po)$?

(A) $H_2Se < H_2Te < H_2Po < H_2O < H_2S$

(B) $H_2S < H_2O < H_2Se < H_2Te < H_2Po$

(C) $H_2O < H_2S < H_2Se < H_2Te < H_2Po$

(D) $H_2Po < H_2Te < H_2Se < H_2S < H_2O$

Correct Option : D

SOLUTION

In oxygen family down the group thermal stability decreases

order of thermal stability

$H_2O > H_2S > H_2Se > H_2T > H_2Po]$

this is because M-H bond dissociation energy decrease down the

group with the increase in the size of central atom.

Q-11 - NEET 2019 - CHEMISTRY

For an ideal solution, the correct option is:

(A) $\triangle_{mix} G = 0$ at constant T and P

(B) $\triangle_{mix} S = 0$ at constant T and P

(C) $\triangle_{mix} V \neq 0$ at constant T and P

(D) $\triangle_{mix} H = 0$ at constant T and P

Correct Option : D

SOLUTION

For ideal solution

$\triangle_{mix} G < 0$ at constant T and P

$\triangle_{mix} S \geq 0$ at constant T and P

$\triangle_{mix} V = 0$ at constant T and P

$\triangle_{mix}\ H = 0$ at constant T and Pf

$\triangle_{mix}\ = H = 0$ at constant T and P

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Q-12 - NEET 2019 - CHEMISTRY

The biodegradable polymer is :

(A) Buna-S

(B) nylon-6,6

(C) nylon 2-nylon 6

(D) nylon-6

Correct Option : C

SOLUTION

Nylon-2-Nylon-6 Biodegradable polymer

Q-13 - NEET 2019 - CHEMISTRY

Enzymes that utilize ATP in phosphate transfer require an alkaline erath metal (M) as the cofactor M is

(A) Sr

(B) Be

(C) Mg

(D) Ca

Correct Option : C

SOLUTION

it is fact.

Q-14 - NEET 2019 - CHEMISTRY

If the rate constant for a first order reaction is k, the time (t) required for the completion of 99% of the reaction is given by :

(A) $t = 2.303 / k$

(B) $t = 0.693 / k$

(C) $t = 6.909 / k$

(D) $t = 4.606 / k$

Correct Option : D

SOLUTION

The 1st order reaction

$$t = \frac{2.303}{k} \log\left(\frac{a}{a-x}\right)$$
$$= \frac{2.303}{k} \log\left(\frac{100}{100-99}\right)$$
$$= \frac{2.303}{K} \log 10^2$$

$$= \frac{2.303}{k} \times 2 \times \log 10$$

$$\frac{2.303}{k} = \frac{4.606}{k}$$

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Q-15 - NEET 2019 - CHEMISTRY

Which of the following diatomic molecular species has only π bonds according to Molecular orbital Theory

(A) Be_2

(B) O_2

(C) N_2

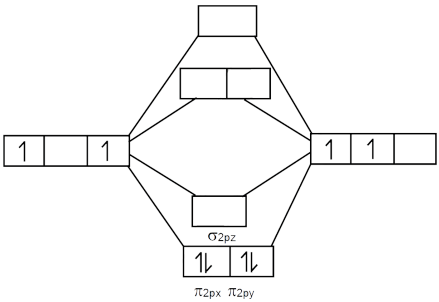
(D) C_2

Correct Option : D

SOLUTION

$Ace^4 MOT$-,

C_2 contains 2π bond as it have 4π electron in molecular orbiritals.



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Q-16 - NEET 2019 - CHEMISTRY

pH of a saturated solution of $Ca(OH)_2$ is 9. the solubility product (K_{sp}) of $Ca(OH)_2$ is

(A) 0.5×10^{-10}

(B) 0.5×10^{-15}

(C) 0.25×10^{-10}

(D) 0.125×10^{-15}

Correct Option : B

SOLUTION

pH of saturated solution of $Ca(OH)_2 = 9$

pOH of saturated of $Ca(OH)_2 = 5$

$OH^- = 10^{-5}$

$$Ca(OH)_2 \Leftrightarrow \underset{1/2}{\times} 10^{-5} \underset{S}{Ca^{2+}} + \underset{\substack{2S \\ 10^{-5}}}{2OH^-}$$

solubility $(s) = 1/2 \times 2 \quad 10^{-5}$

$K_{ap} = [Ba2+][OH^-]^2$

$[1/2 \times 10^{-8}][10^{-5}]^2 = 0.5 \times 10^{-15}$

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Q-17 - NEET 2019 - CHEMISTRY

The mixture that forms maximum boiling azeotrope is :

(A) Heptane + Octane

(B) Water + Nitric acid

(C) Ethanol + Water

(D) Acetone + Carbon disulphide

Correct Option : B

SOLUTION

The maximum boiling azeotrope is shows by negative deviation solution so it is H_2O and HNO_3 mixture

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Q-18 - NEET 2019 - CHEMISTRY

4d, 5p, 5f and 6p orbitals are arranged in the order of decreasing energy. The correct option is :

(A) 5f gt 6p gt 5p gt 4d

(B) 5f gt 6p gt 5p gt 4d

(C) 6p gt 5f gt 5p gt 4d

(D) 6p gt 5f gt 4d gt 5p

Correct Option : B

SOLUTION

Energy α value (n+l)

orbital (n+l) value

5f 5+3=8

6p 6+1=7

4d 4+2=6

5p 5+1=6

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Q-19 - NEET 2019 - CHEMISTRY

Which of the following is an amphoteric hydroxide

(A) $Be(OH_2$

(B) $Sr(OH)_2$

(C) $Ca(OH)_2$

(D) $Mg(OH)_2$

Correct Option : A

SOLUTION

$Be(OH)_2$ is a amphoteric hydroxide [diagonal relationship with $Al(OH)_3$]

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Q-20 - NEET 2019 - CHEMISTRY

Which of the following is incorrect statement?

(A) SnF_4 is ionic in nature

(B) PbF_4 is covalent in natural

(C) $SlCl_4$ is easiliy hydrolysed

(D) $GeX_4(X = F, Cl, Br, l)$ is more stable that GeX_2

Correct Option : B

SOLUTION

PbF_4 and SnF_4 are exceptions they are ionic in nature.

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Q-21 - NEET 2019 - CHEMISTRY

Under isothermal condition, a gas at 300 K expands from 0.1 L to 0.25 L against a constant external pressure of 2 bar. The work done by the gas is : [Given that 1 L bar = 100 J]

(A) 30 J

(B) $-30J$

(C) $5kJ$

(D) $25J$

Correct Option : B

SOLUTION

A gas expands against a constant external pressure is irreversible process. The work done in irreversible process $= -P_{ext} \triangle V$

$= -P_{ext}(V_2 - V_1)$

$= -2(0.25 - 0.1)$

$= -2 \times 0.15 \text{ bar} - L / L\text{-bar}$

$= -30 \times 100J$

$= -30J$

and work done by the gas is $+30J$

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Q-22 - NEET 2019 - CHEMISTRY

The number of sigma (σ) and pi(π) bonds in pent-2-en-4-yne is:

(A) 13σ bonds and no π bond

(B) 10σ bonds and 3π bond

(C) 8σ bonds and 5π bond

(D) 11σ bonds and 2π bond

Correct Option : B

SOLUTION

Pent-2-ne-4-yne

$CH_3 - CH = CH - C \equiv CH$

$\sigma C \equiv 4$

$\sigma C - H = 6$

$\pi C - C = 1$
$\pi C - C = 2$

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Q-23 - NEET 2019 - CHEMISTRY

Match the Xenon compounds Column-I with its structure in Column-II and assign the correct code :

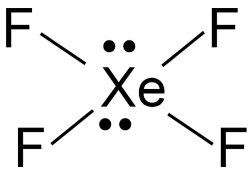
Column-I	Column-II
$(a) XeF_4$	(i)pyramidal
$(b) XeF_6$	(ii) square planar
$(c) XeOF_4$	(iii) distored octahedral
$(d) XeO_3$	(iv) square pyramidal

		(a)	(b)	(c)	(d)
(A)	(1)	(iii)	(iv)	(i)	(ii)
(B)	(2)	(i)	(ii)	(iii)	(iv)
(C)	(3)	(ii)	(iii)	(iv)	(i)
(D)	(4)	(ii)	(iii)	(i)	(iv)

Correct Option : C

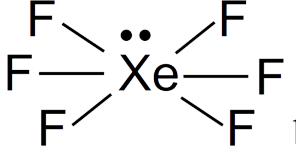
SOLUTION

XeF_4



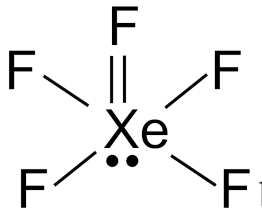
bp=4, lp=2 total =6 square planar

XeF_6



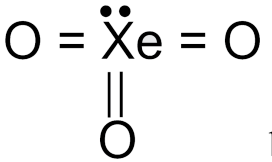
bp=6, ip=1 total =6 distorted octahedral

$XeOF_4$



bp=5, lp=1 total=6 square pyramidal

XeO_3



bp=3, lp=1 total=4 pyramidal

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Q-24 - NEET 2019 - CHEMISTRY

In which can change in entropy is negative

(A) $2H(g) \rightarrow H_2(g)$

(B) Evaporation of water

(C) Expansion of a gas at constant temperature

(D) sublimation of solid to gas.

Correct Option : A

SOLUTION

Entropy=measurement of disorderness if $\triangle n_g < 0$ then $\triangle S < 0$

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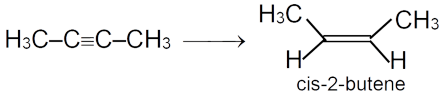
Q-25 - NEET 2019 - CHEMISTRY

The most suitable reagent for the following conversion is

$H_3C - C \equiv C - CH_3 \rightarrow$



(A) $Hg^{2+} / H^+, H_2O$

(B) Na/liquid NH_3

(C) $H_2, Pd / C$ quinoline

(D) Zn / HCl

Correct Option : C

SOLUTION

(1). $Hg^{2+}/H^{2+}, H_2O \rightarrow$ Addition of H_2O at alkene

(2). Na/liquid $NH_3 \rightarrow$ birch reduction (alkyne $\rightarrow$ trans alkene)

(3). $H_2, Pd/C$, quinolone $\rightarrow$ reduce alkyne $\rightarrow$ Cis alkene

(4). $Zn/Hc < o$ reduce alkyne $\rightarrow$ alkyl halide

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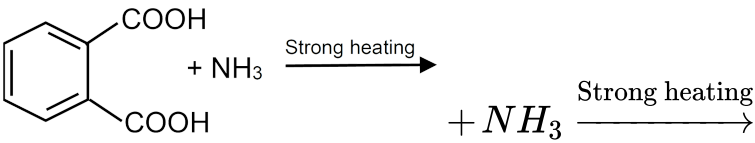
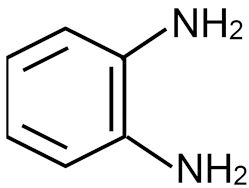
Q-26 - NEET 2019 - CHEMISTRY

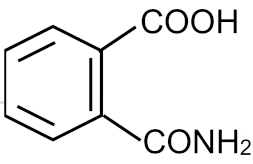
The major product of the following reaction is



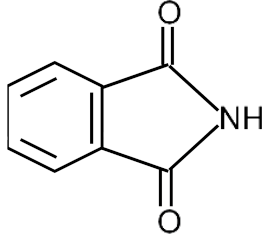
(A) (1)



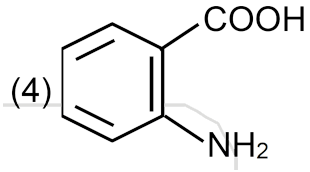
(B) (2)



(C) (3)

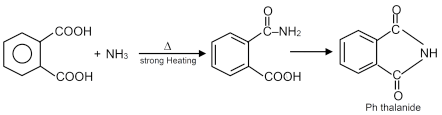


(D) (4)



Correct Option : C

SOLUTION



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Q-27 - NEET 2019 - CHEMISTRY

Match the following:

(a)pure nitrogen	(i) chlorine
(b) Haber process	(ii) Sulphuric acid
(c) Contact process	(iii) Ammonia
(d) deacon's process	(iv) Sodium azide or Barium azide

		(a)	(b)	(c)	(d)
(A)	(1)	(iv)	(iii)	(ii)	(i)
(B)	(2)	(i)	(ii)	(iii)	(iv)
(C)	(3)	(ii)	(iv)	(i)	(iii)
(D)	(4)	(iii)	(iv)	(ii)	(i)

Correct Option : A

SOLUTION

$2NaN_2 \xrightarrow{\triangle} 2Na + 3N_2$

$Ba(N_3)_2 \xrightarrow{\triangle} 2NH_3(g)$

Pure N_2 obtained

$N_2(g) + 3H_2(g) \Leftrightarrow 2NH_3(g)$

[Haber process]

Contact process

$2SO_2(g) + O_2(g) \xrightarrow{V_2O_5} 2SO_3(g)$

$SO_3 + H_2SO_4 \rightarrow H_2S_2O_7(\text{Oleum})$

$$H_2S_2O_7 + H_2O \rightarrow 2H_2SO_4(96 - 98\ \%\quad \text{pure})$$

Deacon process

$$4HCl + O_2 \xrightarrow{CuCl_2} 2Cl_2 + 2H_2O$$

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Q-28 - NEET 2019 - CHEMISTRY

Which of the following series of transitions in the spectrum of hydrogen atom falls in visible region?

(A) Brackett series

(B) Lyman series

(C) Balmer series

(D) Paschen series

Correct Option : C

SOLUTION

Ist four line of balmer series of spectrum of hydrogen atom falls in visible region.

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Q-29 - NEET 2019 - CHEMISTRY

Among the following, the narrow spectrum antibiotic is

(A) Chloramphenicol

(B) Penicillin G

(C) Ampicillin

(D) Amoxycillin

Correct Option : B

SOLUTION

(Penicillin G has a narrow spectrum while Chloramphenicol, Ampicillin, Amoxycillin are broad spectrum)

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Q-30 - NEET 2019 - CHEMISTRY

Which mixture of the solutions will lead to the formation of negatively charged colloidal $[AgI]^-$ sol. ?

(A) 50 ml of 0.1M $AgNO_3$ +50 mL of 0.1 M KI

(B) 50 mL of 1M $AgNO_3$ + 50 mL of 1.5 M KI

(C) 50 mL of 1 M $AgNO_3$+50mL of 2M KI

(D) 50 mL of 2M $AgNO_3$+ 50mL of 1.5 M KI

Correct Option : B

SOLUTION

In compare of 1.5 M Kl is conc solution and Ln 2M Kl solution extra K^+ ion can lead coagulation so better option is 1.5 M Kl

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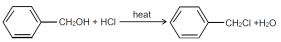
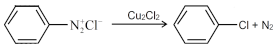
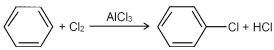
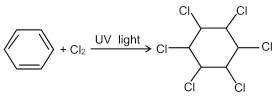
Q-31 - NEET 2019 - CHEMISTRY

Among the following the reaction that produce through an electrophilic substitution is :

(A) (1) 

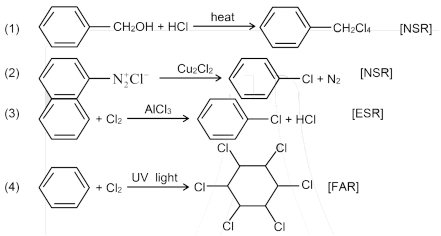
(B) (2) 

(C) (3) 

(D) (4) 

Correct Option : C

SOLUTION



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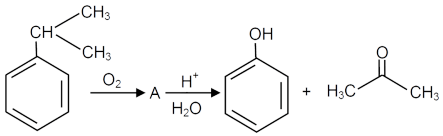
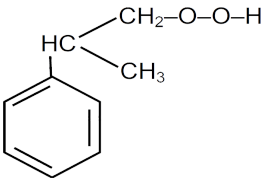
Q-32 - NEET 2019 - CHEMISTRY

The structure of intemediate A in the following reaction is:

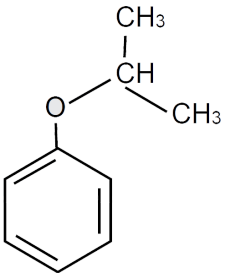


(1)



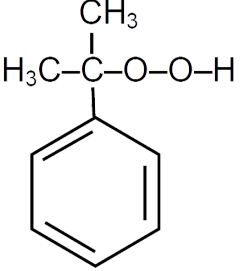
(A)

(2)

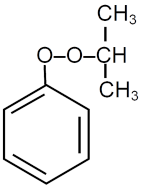


(B)

(C) (3)

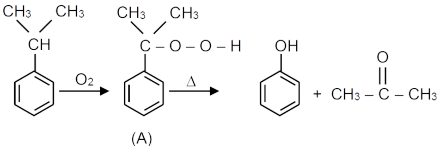


(D) (4)



Correct Option : C

SOLUTION



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Q-33 - NEET 2019 - CHEMISTRY

What is the correct electronic configuration of the central atom in $K_4[Fe(CN)_6]$ based on crystal field theory

(A) $e^4 t_2^2$

(B) $t_{2g}^4 e_g^2$

(C) $t_{2g}^6 e_g^0$

(D) $e^3 t_2^3$

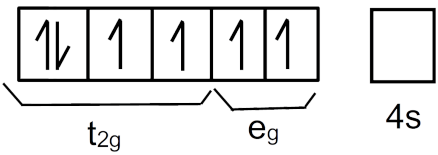
Correct Option : C

SOLUTION

$K_4\left[Fe(CN)_6\right]$

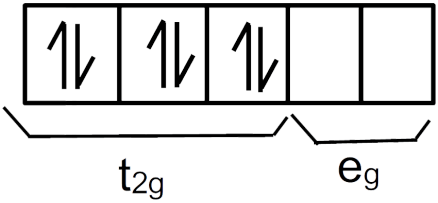
$4(+1)+x+6(-1)=0$

$x=+2$



$Fe^{2+}=[Ar]3d^6 4s^0$

CN^- is a strong ligand due to this pairing of e occur



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Q-34 - NEET 2019 - CHEMISTRY

Among the following, the one that is not a green house gas is

(A) sulphur dioxide

(B) Nitrous oxide

(C) methane

(D) ozone

Correct Option : A

SOLUTION

Beside carbondioxide, other green hourse gases are CH_4, water vapoure N_2O, CFCs and ozone.

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Q-35 - NEET 2019 - CHEMISTRY

Identify the incorrect statement related to PCl_5 from the follwing

(A) PCl_5 molecule in non-reactive.

(B) Three equatorial P-Cl bonds make an angle of 120° with each other

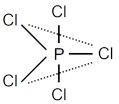
(C) Two axial P-Cl bonds make an angle of 180° with each other

(D) Axial P-Cl bonds

Correct Option : A

SOLUTION

It is reactive gas as easily provide Cl_2 gas



$$\left[(P-Cl)_{\text{Axial Bond Length}} > (P-Cl)_{\text{Equatorial bond length}}\right]$$

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Q-36 - NEET 2019 - CHEMISTRY

Which one is malachite from the following

(A) $CuCO_3 . Cu(OH)_2$

(B) $CuFeS_2$

(C) $Cu(OH)_2$

(D) Fe_3O_4

Correct Option : A

SOLUTION

Malachite ore $= CuCO_3, Cu(OH)_2$

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Q-37 - NEET 2019 - CHEMISTRY

Which of the following species is not stable?

(A) $[SiCl_6]^{2-}$

(B) $[SiF_6]^{2-}$

(C) $[GeCl_6]^{2-}$

(D) $[Sn(OH)_6]^{2-}$

Correct Option : A

SOLUTION

$[SiCl_6]^{-2}$ is not stable due to steric hiderence develop by large size

Cl atom on small size Si atom.

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Q-38 - NEET 2019 - CHEMISTRY

A compound is compound by cation C and anion A. The anions hexagonal close packed (hcp) lattice and the cations occupy 75% of octahedral voids. The formula of the compound is

(A) C_4A_3

(B) C_2A_3

(C) C_3A_2

(D) C_3A_4

Correct Option : D

SOLUTION

Number of atom per unit cell in $hcp = 6$

number of octahedral void in $hcp = 6$

Number of anions per unit cell $= 6$

cation occupy 75% of octahedral void $= 6 \times \frac{75}{100} = \frac{9}{2}$

$C : A$

$9/2 : 6$

$9 : 12$

$3 : 4$

Formula of compound $= C_3A_4$

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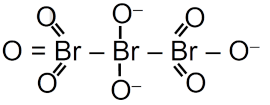
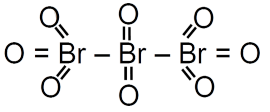
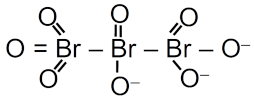
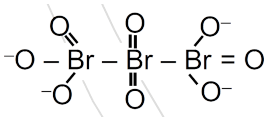
Q-39 - NEET 2019 - CHEMISTRY

The correct structure of tribromootaoxide.

(A) (1) 

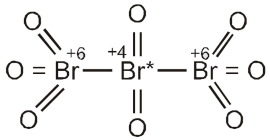
(B) (2) 

(C) (3) 

(D) (4) 

Correct Option : B

SOLUTION



Structure of Br_3O_8 (Tribromooctaoxide)

Likewise in Br_3O_8 each of the two terminal bromine atoms are present in +6 oxidation state and the middle bromide is present in +4 oxidation state. Once again the average, that is different from reality is $+16/3$

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Q-40 - NEET 2019 - CHEMISTRY

The method used to remove temporary hardness of water is:

(A) Synthetic resins method

(B) Calgon's method

(C) Clark's method

(D) Ion-exchange method

Correct Option : C

SOLUTION

Chark's method

$$Ca(HCO_3)_2 + Ca(OH)_2 \rightarrow 2CaCO_3 \downarrow + 2H_2O$$
$$Mg(HCO_3)_2 + 2Ca(OH)_2 \rightarrow 2CaCO_3 \downarrow + Mg(OH)_2 + 2H_2O$$

Clark's method is used to remove temporary hardness of water.

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Q-41 - NEET 2019 - CHEMISTRY

The non-essential amino acid among the following is

(A) Lysine

(B) Valine

(C) Leucine

(D) Alanine

Correct Option : D

SOLUTION

Non essential amino acid

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Q-42 - NEET 2019 - CHEMISTRY

The number of moles of hydrogen molecules required to produce 20 moles of ammonia through Haber's process is :

(A) 40

(B) 10

(C) 20

(D) 30

Correct Option : D

SOLUTION

Formation of ammonia

$N_2 + 3H_2 \rightarrow 2NH_3$

2 mole of NH_3 is formed by 3 mole of H_2

20 mole of NH_3 is formed by 30 mole of H_2

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Q-43 - NEET 2019 - CHEMISTRY

Which of the following reactions are disproportionation reaction ?

(A) $2Cu^{+} \rightarrow Cu^{2+} + Cu^{0}$

(B) $3KMnO_4^{2-} 4H^{+} \rightarrow 2MnO_4^{-} + MnO_2 + 2H_2O$

(C) $2KMnO_4 \xrightarrow{\triangle} K_2MnO_4 + MnO_2 + O_2$

(D)
$2MnO_4^{-} + 3Mn^{2+} + 2H_2O \rightarrow 5MnO_2 + 4H^{+}$

Correct Option : B

SOLUTION

Disproportionation reaction: The reaction in which same element/compound get oxidized and reduced simultaneously.

(a). $2Cu^{+} \rightarrow Cu^{2+} + Cu^{0}$

(b). $3MnO_4^{2-} 4H^{+} \rightarrow 2MnO_4^{-} + MnO_2 + 2H_2O$

(d). Option belongs to comproportionation reactioin.

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Q-44 - NEET 2019 - CHEMISTRY

For the chemical reaction

$N_2(g) + 3H_2(g) \Leftrightarrow 2NH_3(g)$

The correct option is:

(A) $3\frac{d[H_2]}{dt} = 2\frac{d[NH_3]}{dt}$

(B) $-\frac{1}{3}\frac{d[H_2]}{dt} = -\frac{1}{2}\frac{d[NH_3]}{dt}$

(C) $-\frac{d[N_2]}{dt} = 2\frac{d[NH_3]}{dt}$

(D) $-\frac{d[N_2]}{dt} = \frac{1}{2}\frac{d[NH_3]}{dt}$

Correct Option : D

SOLUTION

For the chemical reaction

Rate of electron $= \frac{d(N_2)}{dt} = -\frac{1}{3}\frac{d[H_2]}{dt} = \frac{1}{2}\frac{d(NH_3)}{dt}$

Q-45 - NEET 2019 - CHEMISTRY

Conjugation base for bronsted acids H_2O and HF are:

(A) H_3O^+ and H_2F^+, respectively

(B) OH^- and H_2F^+, respectively

(C) H_3O^+ and F^- respectively

(D) OH^- and F^- respectively.

Correct Option : D

SOLUTION

Bronsted acid	Conjugate base
H_2O	OH^-
HF	F^-

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