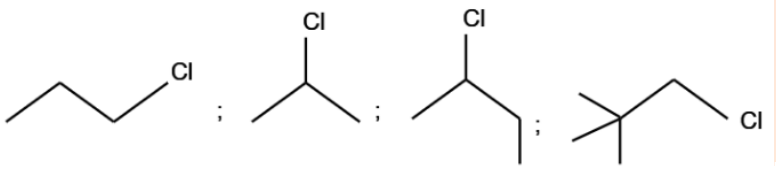
JEE-Main-21-01-2026 (Memory Based)
[EVENING SHIFT]
Chemistry

Question: 1 g of an organic compound produce 1.49 of $Mg_2P_2O_7$ Determine % of P
Options:
(a) 42
(b) 55
(c) 24
(d) 38
Answer: (a)

Question: Given below are two statements
Statement-I: The correct order for radius is Al > Mg > Mg^{2+} > Al^{3+}
Statement-II: Atomic size always, depends on electronegativity.
In the light of the above statements, choose the correct option.
Options:
(a) Statement-I and II are correct
(b) Both Statement-I and II are incorrect
(c) Statement-I is correct but Statement-II incorrect
(d) Statement-I is incorrect but Statement-II correct
Answer: (b)

Question: Following 4 molecules are given and among then, one is optically effective : Find % carbon in that compound:-



Options:
(a) 52
(b) 65
(c) 35
(d) 89
Answer: (a)

Question: When 8.74 g MnO_2 is treated with HCl, then what will be the weight of Cl_2(g) obtained?
Molar mass of MnO_2 = 87.4 g/mol
Options:
(a) 7.1 g
(b) 17.1 g

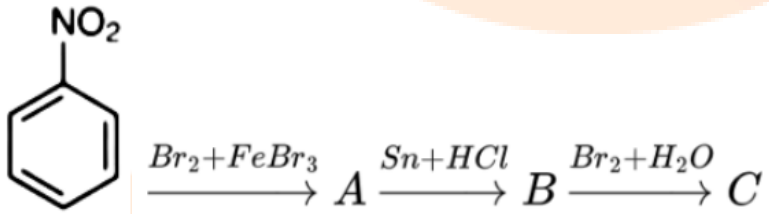
(c) 14.2 g
(d) 3.55 g
Answer: (a)

Question: Some species are given
Ni^{2+}, Fe^{2+}, Co^{2+}, V^{3+} and Ti^{2+}
How many species has magnetic moment (spin only) less than 3 BM.
Options:
(a) 4
(b) 2
(c) 3
(d) 1
Answer: (c)

Question: Find concentration of X^{2-} at equilibrium in 0.1 M H_2X.
Given $K_{a_1} = 2.5\times10^{-7}$
$K_{a_2} = 1\times10^{-13}$
Options:
(a) 2.5×10^{-7}
(b) 1×10^{-13}
(c) 6×10^{-12}
(d) 5×10^{-10}
Answer: (b)

Question: Correct Nucleophilicity order,
CH_3COO^-, Ph—$O^{\ominus}$, $OH^{\ominus}$, ClO_4^-
Options:
(a) $ClO_4^- < CH_3COO^- < PhO^- < {}^-OH$
(b) $CH_3COO^- < PhO^- < {}^-OH < ClO_4^-$
(c) $ClO_4^- < CH_3COO^- < {}^-OH < PhO^-$
(d) $ClO_4^- < PhO^- < {}^-OH < CH_3COO^-$
Answer: (a)

Question: Number in bromine in final product



Options:
(a) 2
(b) 4
(c) 1
(d) 3
Answer: (b)

Question: Match the following

Reagent	Reaction
A) H_2, Pd-$BaSO_4$	i) Etard Reaction
B) $SnCl_2$, HCl	ii) Rosenmund Reduction
C) CrO_2Cl_2, CS_2	iii) Gatterman-Koch Reaction
D) CO, HCl Anhyd. $AlCl_3$	iv) Stephan Reduction

Options:
(a) A-(ii), B- (iv), C-(i), D-(iii)
(b) A-(iii), B- (ii), C-(iv), D-(i)
(c) A-(iv), B- (i), C-(ii), D-(iii)
(d) A-(ii), B- (iii), C-(i), D-(iv)
Answer: (a)

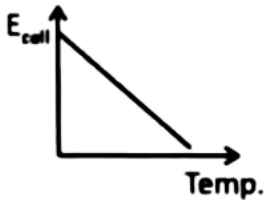
Question: What will be the ratio of wavelength of 3rd line at Paschen Series to 2nd line of Balmer series of H-atom?
Options:
(a) $\frac{4}{9}$
(b) $\frac{3}{2}$
(c) $\frac{2}{3}$
(d) $\frac{16}{4}$
Answer: (a)

Question: $K_2Cr_2O_7$ is heated with KCl in pressure of H_2SO_4. Find the correct match of product with their oxidation state.
Options:
(a) CrO_2Cl_2, +6
(b) $Cr_2O_2Cl_2$, +6
(c) $Cr_2O_2Cl_2$, +5
(d) CrO_2Cl_2, +5
Answer: (a)

Question: Osmotic pressure of a solution is 12 atm. What is the concentration of NaCl solution which is isotonic to the given solution at 900 K.
R = 0.082 Lit-atm K^{-1} mol^{-1}
Assume 100% dissociation.
Options:
(a) 0.4878 M
(b) 0.02439 M
(c) 0.2439 M
(d) 0.04878 M
Answer: (c)

Question: Find out correct Graph
Options:

(a)



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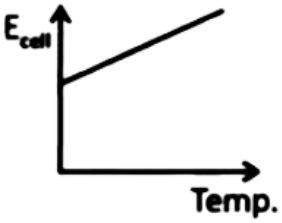
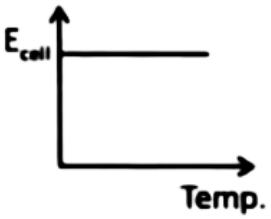
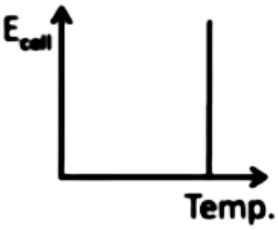


(c)



(d)



Answer: (a)

Question: For first order kinetics reaction,
$A \rightarrow B + C$
If initial pressure of A is 1 bar and at time 100 s, the total pressure is 1.5 bar, then find the rate constant of the reaction.
Options:
(a) $6.93 \times 10^{-3}\ s^{-1}$
(b) $6.93 \times 10^{-2}\ s^{-1}$
(c) $0.693\ s^{-1}$
(d) $6.93\ s^{-1}$
Answer: (a)

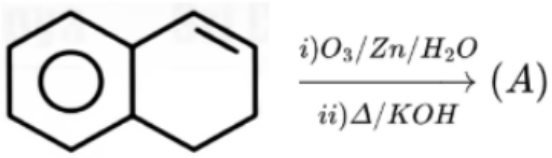
Question: Match the list-I with list-II

Reagent	Reaction
A) Cis 2-butene, Trans 2-butene	P) Functional Isomer
B) Butanoic acid, Isopropyl methanoate	Q) Stereoisomer

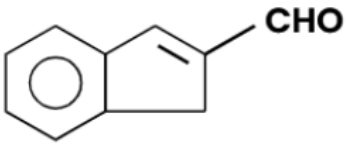
C) 1-butene, 2-butene	**R) Positional Isomer**
D) n-pentane, isopentane	**S) Chain isomer**

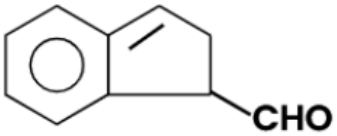
Options:
(a) A-(P); B-(Q); C-(R); D-(S)
(b) A-(P); B-(Q); C-(S); D-(R)
(c) A-(Q); B-(P); C-(S); D-(R)
(d) A-(Q); B-(P); C-(R); D-(S)
Answer: (d)

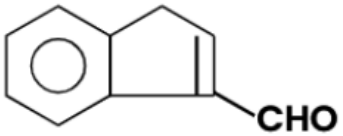
Question:

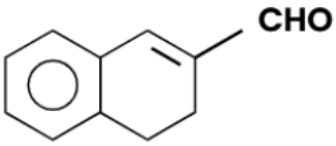


Find the product A
Options:

(a) 

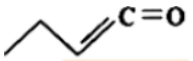
(b) 

(c) 

(d) 

Answer: (a)

Question: Given below are two statements.
Statement-I: The correct order of electron gain enthalpies Cl > F > Br > I.
Statement-II: $SnCl_6 > SnCl_4$, $PbCl_4 > PbCl_2$, $UF_6 > UF_4$, order of Ionic Character.
which is the correct option.
Options:
(a) Both Statement-I and statement-Ii are correct
(b) Both statement-I and statement-II are incorrect
(c) Statement-I is correct and statement-II is incorrect
(d) Statement-i is incorrect and statement-II is correct
Answer: (b)

Question: Given below are two statements.
Assertion: In aromatic Compound should be cyclic and planar with all C - should be sp^2 with one unhybrid p-orbitals and follow Huckels rules.
Reason: In given compound,  **2 carbon is sp^3 & 1 is sp^2.**
Options:
(a) Both (A) and (R) are true, and (R) is the correct explanation (A).
(b) Both (A) and (R) are true, but (R) is NOT the correct explanation of (A).
(c) (A) is true, but (R) is false.
(d) (A) is false, but (R) is true.
Answer: (b)

Question: Solubility product of MX(s) is 10^{-10} and $E^{o}_{\frac{M^+}{M}} = 0.71\,V$. Find out $E^{o}_{M/MX/X^-}$.

Options:
(a) 0.119 V
(b) -0.119 V
(c) 1.301 V
(d) -1.301 V
Answer: (b)

Question: Give the correct bond length order of C—H; C—O; C=O; CN
Options:
(a) C - H > C-O > C = O > CN
(b) C - O > C = O > CN > C-H
(c) C-H > C-O > CN > C = O
(d) CN > C - O > C - H > C = O
Answer: (a)

Question: Select correct statements
(A) Amylose a long branched chain polymer, formed by C_2 – C_6 glycosidic linkage.
(B) During denaturation destroyed but primary structures remained intact.
(C) Globular proteins structures results when the chains of polypeptides coil around to give a spherical shape.
(D) Carbohydrates which reduce Fehling's and Tollen's reagent are reducing sugars.
Options:
(a) A, B, C, D
(b) A, C, D
(c) B, C, D
(d) C, D
Answer: (c)