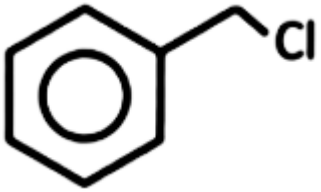
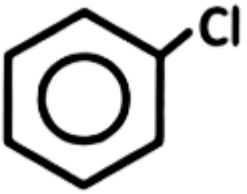
JEE-Main-24-01-2026 (Memory Based)
[MORNING SHIFT]
Chemistry

Question: Match List-I with List-II

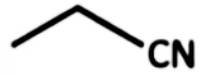
List-I	List-II
A) Vinyl halide	**i)** 
B) Allyl halide	**ii)** 
C) Benzyl halide	**iii)** 
D) Aryl halide	**iv)** 

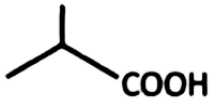
Select the correct option.
Options:
(a) A(ii), B(i), C(iii), D(iv)
(b) A(i), B(ii), C(iii), D(iv)
(c) A(i), B(ii), C(iv), D(iii)
(d) A(ii), B(i), C(v), D(iii)
Answer: (b)

Question:

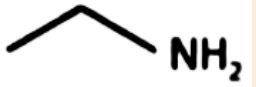
$$A \xrightarrow[II.\,H_3O^+]{I.\,SnCl_2/HCl} B \xrightarrow[H^+]{KMnO_4} C \xrightarrow[H_2O]{Cl_2,P} C_3H_5O_2Cl$$

Final product has one chiral centre. Structure of A is
Options:

(a) 

(b) 

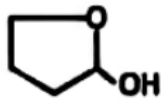
(c) 

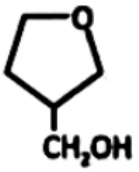
(d) 

Answer: (a)

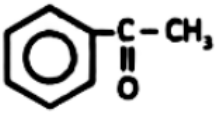
Question: Which of following compound contains 3 unpaired electrons?
Options:
(a) V_2O_5
(b) $[TiF_6]^{3-}$
(c) $[CoF_6]^{4-}$
(d) $[Fe(CN)_6]^{3-}$
Answer: (c)

Question: Which of the following compounds with give positive Tollen's reagent test?

A. 

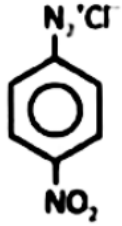
B. 

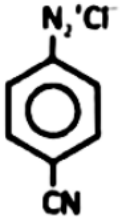
C. 

D. 

Options:
(a) A, B and C only
(b) A and C only
(c) A, C and D only
(d) B, C and D only
Answer: (b)

Question: The correct order of stability of following diazonium ions is

a. 

b. 

c. 

d. 

Options:
(a) a < b < c < d
(b) a < b < d < c
(c) c < d < b < a
(d) d < c < n < a
Answer: (a)

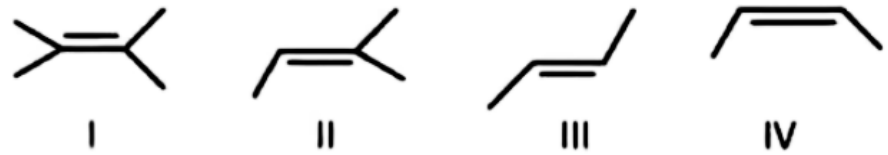
Question: $K_2Cr_2O_7 + I^- + H^+ \rightarrow I_2$ (x = number of moles of e^- exchanged per mol I_2) $K_2Cr_2O_7 + S^{2-} \rightarrow S$ (y = number of moles of e^- exchanged for mole of S) x + y is
Options:
(a) 12
(b) 9
(c) 4
(d) 6
Answer: (c)

Question: Match the column

Column-I	Column-I
A) IF_3	i) sp^3d^3, Pentagonal bipyramidal
B) IF_5	ii) sp^3d^3, T-shaped
C) IF_7	iii) sp^3, Tetrahedral
D) ClO^-_4	iv) sp^3d^2, Square pyramidal

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

Question: Consider the following alkene



The correct stability order of alkenes is

Options:

(a) II > I > III > IV

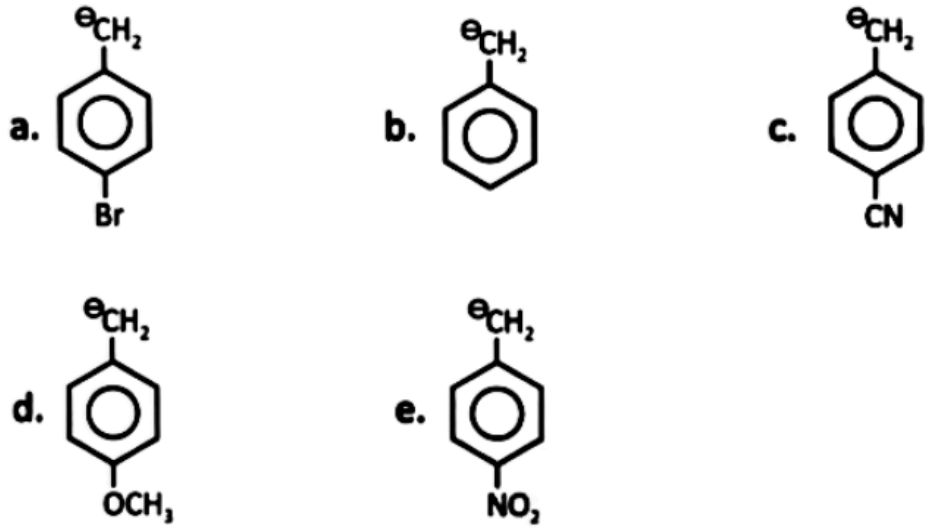
(b) I > II > IV > III

(c) I > II > III > IV

(d) III > I > II > IV

Answer: (c)

Question: The correct order of stability of following species is



Options:

(a) e > c > a > b > d

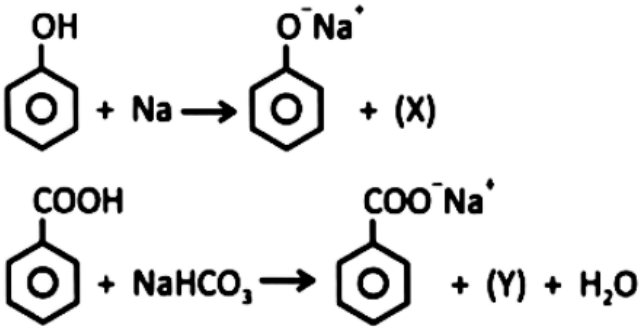
(b) d > c > b > a > e

(c) e > a > c > b > d

(d) e > a > b > c > d

Answer: (a)

Question: What is the sum of molar mass of X and Y formed in the given reactions?



Options:

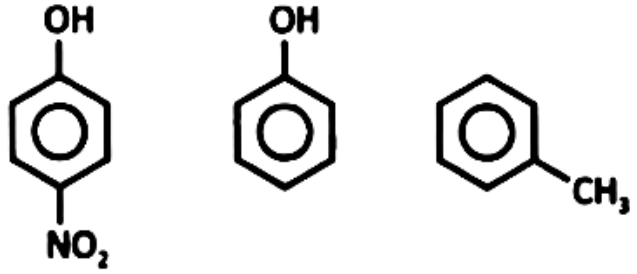
(a) 46

(b) 44

(c) 2

(d) 42
Answer: (a)

Question: Consider the following molecules.



(A) **(B)** **(C)**

The correct order of dipole moment is
Options:
(a) A > B > C
(b) A > C > B
(c) B > A > C
(d) C > A > B
Answer: (a)

Question: Given below are two statements.
Statement-I: Atomic radius is always more than ionic radius.
Statement-II: The correct order of metallic character is K > Mg > Al > B
In the light of of above statements, choose 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 but statement-II is incorrect
(d) Statement-I is incorrect but statement-II is correct
Answer: (d)

Question: Match the following

Column-I	**Column-I**
A) Free expansion	**i) W = - $P_{ex}\Delta V$**
B) Reversible isothermal	**ii) W = $nC_V dT$**
C) Irreversible isothermal	**iii) W = 0**
D) Adiabatic reversible	**iv)** $W = -nRTln\frac{V_r}{V_1}$

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

Question: Non-volatile solute A of mass 0.3 g (Molecular mass = 60), and non-volatile solute B of mass 0.9 g (Molecular mass = 180) in 100 mL H_2O at 27°C. If K_b = 0.52 K•Kg•mol^{-1}, then elevation of boiling point is
Options:
(a) 0.52 K
(b) 0.052 K
(c) 0.026 K
(d) 0.083 K
Answer: (b)

Question: A solution contains two group-IV cations, X^{2+} and Y^{2+}, each at an initial concentration of 0.1 M. H_2S gas is passed through the solution to form a saturated solution. Given
K_{sp} of YS = 2×10^{-27} M^2
K_{sp} of XS = 1×10^{-27} M^2
What is the minimum concentration of sulphide in [S^{2-1}] required to begin precipitation of YS?
Options:
(a) 2×10^{-26}
(b) 10^{-26}
(c) 3.2×10^{-14}
(d) 0.1
Answer: (a)

Question: Two solutes A and B of 0.3 g and 0.9 g respectively (molar mass of A and B are 30 g/mol and 90 g/mol respectively. Calculate of osmotic pressure at 300 K (in atm)
Options:
Answer: (5)

Question: Minimum energy transition of Balmer series (energy line having minimum energy) of H-atom has energy of L eV. If the value of minimum energy of Lymen series (energy line having minimum energy) of H-atom in terms of L is y, then the value of 10y is
Options:
Answer: (2)

Question: Find % of 'N' in 0.5 g organic compound which gives 34 mL N_2(g) at 715 mm Hg pressure and 300 K Aq. tension = 15 mm Hg
(Report to nearest integer) $R = 0.0821 \frac{Lit-atm}{K-mol}$
Options:
Answer: (7)

Question: Find the value of $log\left(\frac{K_{catalyst}}{K_{uncatalyst}}\right)$ at 300K. If the charge in activation energy (DEa) is -10 kJ/mol.
(R = 8 jK^{-1} mol^{-1}) (lnx = 2.31 logx)
Options:
Answer: (2)