JEE – Advanced 17th May 2026

Paper 02

Question paper and Solution

CHEMISTRY

SECTION 1 (Maximum Marks: 12)

- This section contains **FOUR (04)** questions.
- Each question has **FOUR** options (A), (B), (C) and (D). **ONLY ONE** of these four options is the correct answer.
- For each question, choose the option corresponding to the correct answer.
- Answer to each question will be equated **according to the following marking scheme**:
  Full Marks : +3 If ONLY the correct option is chosen;
  Zero Marks : 0 if none of the options is chosen (i.e. the question is unanswered);
  Negative Marks : –1 In all other cases.

SECTION 2 (Maximum Marks: 20)

- This section contains **FIVE (05)** questions.
- Each question has **FOUR** options (A), (B), (C) and (D). **ONE OR MORE THAN ONE** of these four option(s) is (are) correct answer(s).
- For each question, choose the option(s) corresponding to (all) the correct answer(s).
- Answer to each question will be equated **according to the following marking scheme**:
  Full Marks : +4 **ONLY** if (all) the correct option(s) is(are) chosen;
  Partial Marks : +3 If all the four options are correct but **ONLY** three options are chosen;
  Partial Marks : +2 If three or more options are correct but **ONLY** two options are chosen, both of which are correct;
  Partial Marks : +1 If two or more options are correct but **ONLY** one option is chosen and it is a correct option;
  Zero Marks : 0 if none of the options is chosen (i.e. the question is unanswered);
  Negative Marks : –1 In all other cases.
- For example, in a question, if (A), (B) and (D) are the ONLY three options corresponding to correct answers, then
  choosing ONLY (A), (B) and (D) will get +4 marks;
  choosing ONLY (A) and (B) will get +2 marks;
  choosing ONLY (A) and (D) will get +2 marks;
  choosing ONLY (B) and (D) will get +2 marks;
  choosing ONLY (A) will get +1 mark;
  choosing ONLY (B) will get +1 mark;
  choosing ONLY (D) will get +1 mark;
  choosing no option (i.e. the question is unanswered) will get 0 marks; and
  choosing any other combination of options will get −1 marks.

SECTION 3 (Maximum Marks: 20)

- This section contains **FIVE (05)** questions.
- The answer to each question is a **NUMERICAL VALUE**.
- For each question, enter the correct numerical value corresponding to the answer in the designated place using the mouse and the on-screen virtual numeric keypad.
- If the numerical value has more than two decimal places, **truncate/round-off** the value to **TWO** decimal places.
- Answer to each question will be equated **according to the following marking scheme**:
  Full Marks : +4 If **ONLY** the correct numerical value is entered in the designated place;
  Zero Marks : 0 In all other cases.

SECTION 4 (Maximum Marks: 8)

- This section contains **TWO (02)** question stems.
- This section contains **TWO (02)** questions corresponding to each question stem.
- The answer to each question is a **NUMERICAL VALUE**.
- For each question, enter the correct numerical value corresponding to the answer in the designated place using the mouse and the on-screen virtual numeric keypad.
- If the numerical value has more than two decimal places, truncate/round-off the value to TWO decimal places.
- Answer to each question will be equated **according to the following marking scheme**:
  Full Marks : +2 If **ONLY** the correct numerical value is entered in the designated place;
  Zero Marks : 0 In all other cases.

Section 1
Multiple choice questions with one correct alternative

1. At 300 K, the molar conductivities of the aqueous solutions of three salts at two different concentrations are given below:

Salt	Concentration (M)	Molar conductivity ($S\ cm^2\ mol^{-1}$)
$NaNO_3$	0.01	111
	0.04	101
NaCl	0.01	117
	0.04	107
$AgNO_3$	0.01	125
	0.04	116

The conductivity of a saturated aqueous solution of AgCl is 1.40×10^{-6} S cm^{-1} at 300 K. If the solubility of AgCl in water at 300 K is X mol L^{-1}, then $\log_{10}(X^{-1})$ is
(Assume that AgCl dissolved in water ionizes completely and that the molar conductivity of saturated AgCl solution is equal to its limiting molar conductivity.)
(A) 3 (B) 4 (C) 5 (D) 6

Ans (C)

$\Lambda_m = A\sqrt{C} + \Lambda_m^\infty$ on solved equation

For $NaNO_3$; $111 = A\sqrt{0.01} + \Lambda_m^\infty$

$111 = A(0.1) + \Lambda_m^\infty$ …(1)

$$101 = A\left(2\times10^{-1}\right) + \Lambda_m^\infty \qquad \ldots(2)$$

2 × equation (1) – equation - (2)

$$222 = 2\times10^{-1}A + 2\Lambda_m^\infty$$

$$\underset{(-)}{101 = 2\times10^{-1}A + \Lambda_m^\infty}$$

$$121 = \Lambda_m^\infty \text{for } NaNO_3$$

For $NaCl : \Lambda_m^\infty = 117\times2 - 107$

For $AgNO_3 : \Lambda_m^\infty = 125\times2 - 116$

$= 134$

$$\left(\Lambda_m^\infty\right)_{AgCl} = \left(\Lambda_m^\infty\right)_{AgNO_3} + \left(\Lambda_m^\infty\right)_{NaCl} - \left(\Lambda_m^\infty\right)_{NaNO_3}$$

$$= 134 + 127 - 121$$

$$= 140$$

As for AgCl %α = 100 % given

$$\Lambda_m^\infty = \frac{K\times1000}{C}$$

$$C = \frac{K\times1000}{\Lambda_m^\infty} = \frac{1.4\times10^{-6}\times10^3}{140}$$

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

AgCl is 100 % ionise

$$AgCl \longrightarrow Ag^+ + Cl^-$$

t = 0	$C = 10^{-5}$	–	–
t = t		10^{-5}	10^{-5}

Given solubility (X) = 10^{-5} = s

Then $\log X^{-1} = \log\left\{\left(10^{-5}\right)^{-1}\right\}$

$$= \log10^{+5}$$

$$= 5$$

2. The correct order of ONO bond angle in the given species is

(A) $NO_2^+ < NO_2 < NO_3^- < NO_2^-$ (B) $NO_2^- < NO_3^- < NO_2 < NO_2^+$

(C) $NO_3^- < NO_2^- < NO_2 < NO_2^+$ (D) $NO_2^- < NO_3^- < NO_2^+ < NO_2$

Ans (B)

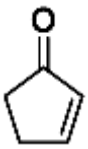
$NO_2^+ \Rightarrow$ sp hybridisation $\Rightarrow$ linear $\Rightarrow 180°$

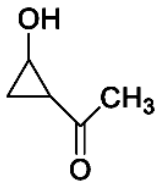
$NO_2 \Rightarrow$ sp^2 hybridisation $\Rightarrow$ bond angle = 134°

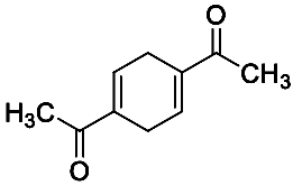
$NO_3^- \Rightarrow$ trigonal bipyramidal $\Rightarrow$ bond angle = 120°

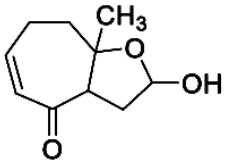
$NO_2^- \Rightarrow$ sp^2 hybridisation $\Rightarrow$ but due to presence of lone pair bond angle decrease to 115°

3. Natural rubber on complete ozonolysis (O_3/Zn-H_2O) gives compound **X** as the major product. **X** gives positive iodoform and Tollen's tests. **X** on heating with aqueous NaOH gives **Y** as the major product. **Y** is

(A) 

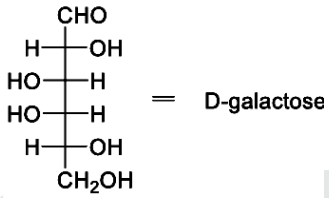
(B) 

(C) 

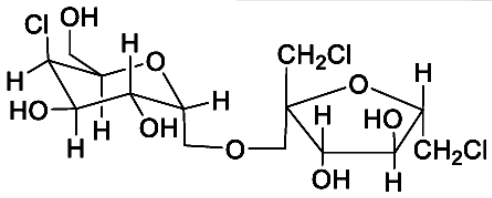
(D) 

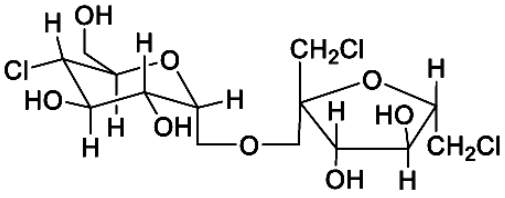
Ans (A)

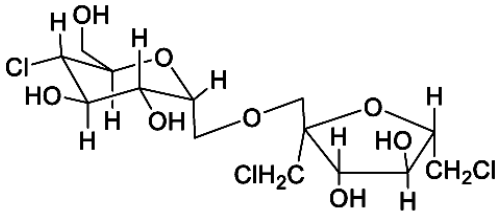
4. A known artificial sweetener **X** is composed of 4-chloro-4-deoxy-α-D-galactose and 1,6-dichloro-1,6-dideoxy-β-D-fructose joined by a glycosidic linkage. Structure of D-galactose is given below:

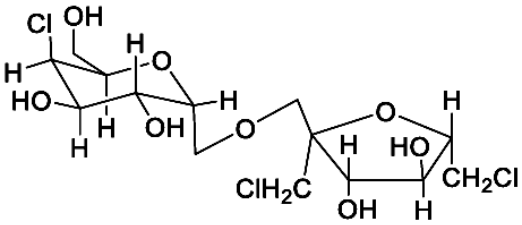


The correct structure of **X** is

(A) 

(B) 

(C) 

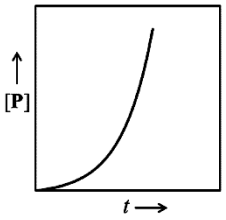
(D) 

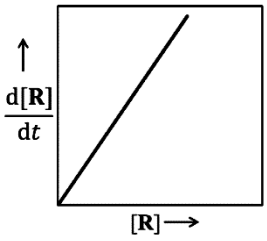
Ans (A)

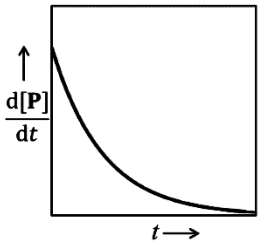
Section 2

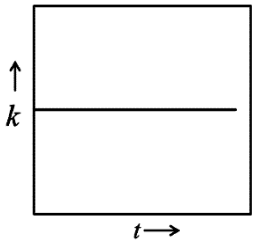
Multiple choice questions with one or more than one correct alternative/s

5. For a first-order reaction **R** ⟶ **P** at a given temperature, k is the rate constant. For this reaction, at the given temperature, the concentrations of **R** and **P** at a time t are [**R**] and [**P**], respectively. The correct graphical representation(s) for this reaction is(are)

(A) 

(B) 

(C) 

(D) 

Ans (C) and (D)

(A) [p] Vs t

$[p] = [R]_0 (1 - e^{-kt})$ (only increases)

not increasing exponentially

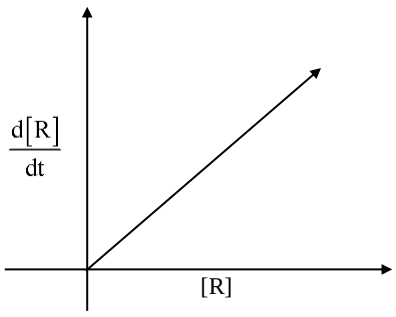
incorrect $\quad -d\dfrac{[R]}{dt} = k[R]$

$$d\frac{[p]}{dt} = k[R]$$

(B) $\dfrac{-d[R]}{dt}$ vs $[R]$

Rate = k[R]

directly proportional, hence a negative slope is expected therefore given graph is incorrect



(C) $\dfrac{dp}{dt}$ vs t

$$\frac{d[p]}{dt} = k[R]$$

$$= k[R]_0 e^{-kt}$$

It should decrease exponentially correct

(D) k vs t constant

6. Correct statement(s) about the compounds **P**, **Q** and **R** is(are)

$$\underset{(1:5\,\text{ratio})}{Xe(g) + F_2(g)} \xrightarrow{873\ K,\ 7bar} \mathbf{P}$$

$$\mathbf{P} + O_2F_2 \xrightarrow{143\ K} \mathbf{Q} + O_2$$

$$\mathbf{Q} + H_2O \xrightarrow{\text{complete hydrolysis}} \mathbf{R} + HF$$

(A) **P** has two lone pairs of electrons on the central atom.

(B) **Q** has a perfect octahedral geometry.

(C) **Q** can act as a fluorinating agent.

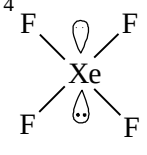
(D) The molecular structure of **R** is trigonal pyramidal.

Ans (A), (C) and (D)

$$\underset{1:5}{Xe_{(g)}} + F_{2(g)} \xrightarrow{873K,\ 7bar} \underset{(P)}{XeF_4(S)}$$

$$\underset{(Q)}{XeF_6} + 3H_2O \xrightarrow[\text{hydrolysis}]{\text{complete}} \underset{(R)}{XeO_3} + 6 + 1F$$

XeF_4



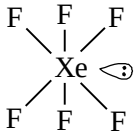
(P)

square planar

2lp

sp^3d

XeF_6

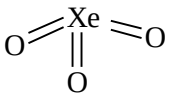


(P)

Distubted octahedral

sp^3d^3 1lp

XeO_3



(R)

Pyramidal

$sp^3$1lp

7. The correct statement(s) regarding the periodic properties of elements is(are)

(A) Second ionization enthalpy of carbon atom is less than that of boron atom.

(B) Increasing order of ionic radii: $Al^{3+} < Mg^{2+} < Na^+$

(C) Under identical conditions, in solid state, the density of potassium metal is more than density of sodium metal.

(D) The H-H bond is weaker than F-F bond.

Ans (A) and (B)

Correct statements among the following are

(A) IE_2 of $C < IE_2$ of B (correct)

e^- conf^n of $C^+ = 1s^2 2s^2 2p^1$

$B^+ = 1s^2 2s^2$

B^+ has completely filled 2s

(B) Ionic radius increasing order

$Al^{+3} < Mg^{+2} < Na^+$

Correct as for iso electronic ions, +ve charge ↑, size ↓

(C) Given density of Na < density of K under identical condition in solid state (wrong)

as $\underset{0.97\ g\ cm^{-3}}{d_{Na}} > \underset{0.86\ g\ cm^{-3}}{d_K}$

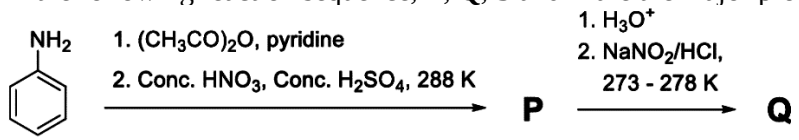
(D) Given H–H bond weaker than F–F bond (wrong)

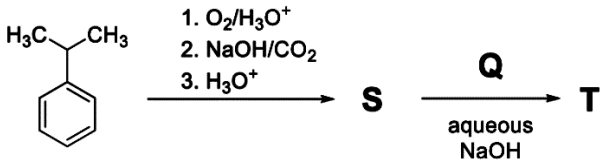
Because H–H bond stronger than F–F due to lp-lp repulsion in F–F bond.

BE of H–H > F–F

436 kJ/mol 155 kJ/mol

8. In the following reaction sequence, **P**, **Q**, **S** and **T** are the major products.





The correct statement(s) about **P**, **Q**, **S** and **T** is(are)

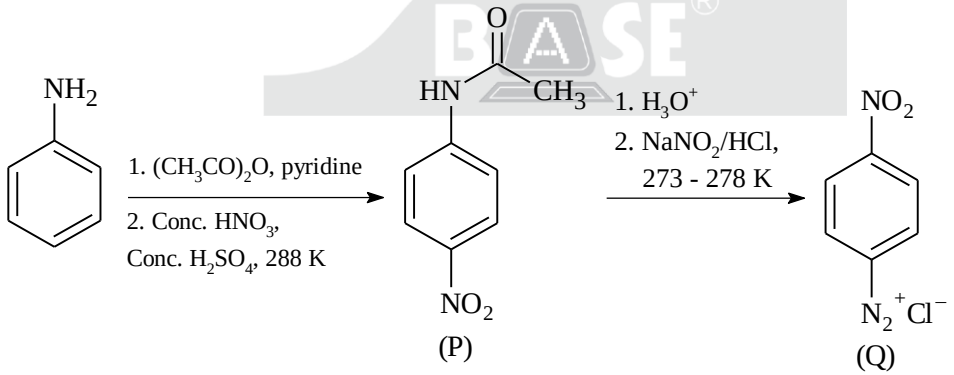
(A) **Q** on treatment with ethanol generates an aromatic aldehyde.

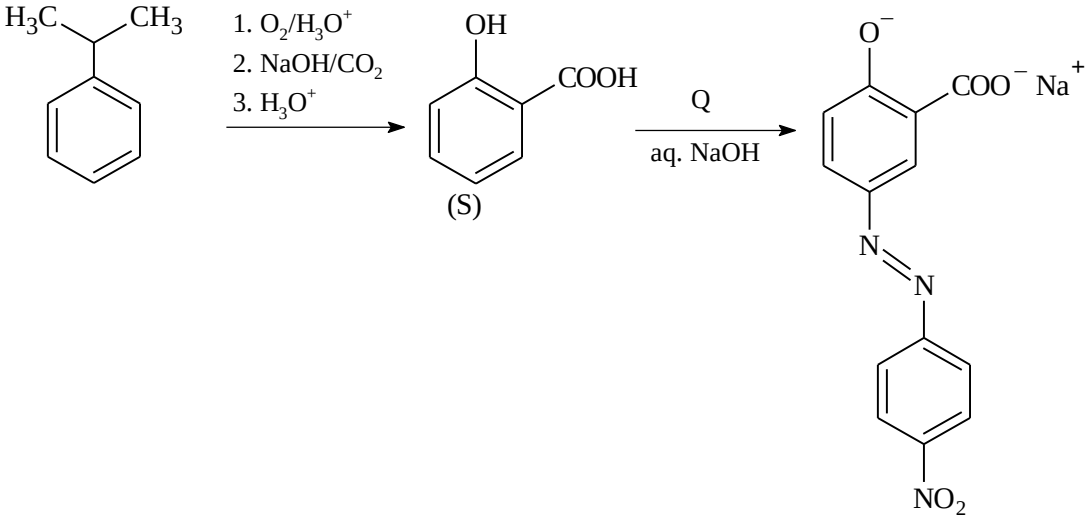
(B) **S** gives positive phthalein dye test.

(C) **P** is a dinitro compound.

(D) **T** is a coloured compound.

Ans (B) and (D)





9. The correct statement(s) regarding sugars is(are)

Given: Specific rotations of L-(−)-glucose and L-(+)-fructose are −52.5° and +92.5°, respectively.

(A) On treatment with HNO3, gluconic acid is oxidized to saccharic acid, whereas glucose is not oxidized to saccharic acid.

(B) Fructose gives a positive Fehling's test because it isomerises to glucose and another aldohexose in the presence of Fehling's reagent.

(C) Invert sugar is an equimolar mixture of D-glucose and D-fructose formed after hydrolysis of the corresponding disaccharide.

(D) Specific rotation of invert sugar is −40°.

Ans (B) and (C)

$$\underset{\Downarrow}{L(-)\text{Glucose}} \;\&\; \underset{\Downarrow}{L(+)\text{Glucose}}$$
$$-52.5° \qquad +92.5°$$

(A) False

Gluconic acid $\xrightarrow{HNO_3}$ Saccharic acid

Glucose $\xrightarrow[HNO_3]{X}$ Saccharic acid (it does)

(B) True

Fructose $\longrightarrow$ (+)ve Fehling because

Isomerise to glucose + aldohexose (Manose)

(C) True

(D) False

–20° (not – 40°)

(+) glucose $\Rightarrow$ 52°.5

(–) fructose $\Rightarrow$ –92°.5

Sucrose $\Rightarrow$ +66.5

$$\Rightarrow \left(\frac{-52+(+92°)}{2}\right)=\frac{40}{2}=20$$

Section 3
Numerical problems (truncated/round off to two decimal places)

10. X^{a+} and Y^{b+} are hydrogen-like species. The wavelength of light absorbed during the transition between the states with principal quantum numbers n = 1 and n = 2 of $\mathbf{X^{a+}}$ is λ. The wavelength of light absorbed during the transition between the states with principal quantum numbers n = 2 and n = 4 of $\mathbf{Y^{b+}}$ is 9λ. The lowest possible value of (**a + b**) is _____.

Ans 3.00

$\mathbf{X^{a+}}$

$$\frac{1}{\lambda}=R_H Z^2\left[\frac{1}{1^2}-\frac{1}{2^2}\right]$$

$$\lambda=\frac{4}{3}\times\frac{1}{R_H Z_X^2}$$

$\mathbf{y^{b+}}$

$$\frac{1}{9\lambda}=R_H Z^2\left[\frac{1}{2^2}-\frac{1}{4^2}\right]$$

$$9\lambda=\frac{16}{3}\times\frac{1}{R_H Z_y^2}$$

$$9=\frac{16/3}{4/3}\times\frac{Z_X^2}{Z_y^2}$$

$$\frac{Z_x^2}{Z_y^2}=\frac{9}{4}\Rightarrow\frac{Z_x}{Z_y}=\frac{3}{2}$$

11. At a given temperature, 0.45 g of acetic acid in 50 mL of water is shaken with 1.0 g of charcoal and the pH of the resulting solution is 3.0. Assume, the adsorption of acetic acid from the aqueous solution by charcoal follows Freundlich isotherm,

$$\frac{x}{m}=kC^{\frac{1}{n}}$$

If the plot of $\log_{10}(x/m)$ against $\log_{10}C$ gives a straight line with slope 1, the value of k in L mol^{-1} is _____.

Given: The molar mass of acetic acid is 60 g mol^{-1}.

The acid dissociation constant of acetic acid is 1.0×10^{-5} at the given temperature.

x is the mass (in grams) of acetic acid adsorbed.

m is the mass (in grams) of charcoal.

C is the equilibrium concentration of acetic acid in the solution after the adsorption is complete.

k and n are constants for acetic acid-charcoal system at the given temperature.

Ans 1.50

$$\underset{C_e=C_i-x}{\overset{C_i}{AcOH}}\rightleftharpoons\underset{x}{\overset{O}{H^+}}+\underset{x}{\overset{O}{AcO^-}}$$

$$K_a=\frac{x\times x}{C_e}\Rightarrow C_e=\frac{x\times x}{K_a}=\frac{10^{-3}\times10^{-3}}{1.0\times10^{-5}}\qquad\because p^H=3\Rightarrow[H^+]=10^{-3}$$

$$C_e=10^{-1}\ \text{mol}\ L^{-1}$$

$\Rightarrow$ Grams of acetic in solution at equilibrium is

$$10^{-1}\frac{\text{mol}}{L}\times0.05\ L\times60\frac{g}{\text{mol}}=0.3\ g.$$

$\Rightarrow$ Gram of acetic adsorbed, x = 0.45g – 0.3 g = 0.15 g

$$\Rightarrow\frac{x}{m}=\frac{0.15g}{1g}=0.15$$

From Freundlich isotherm $\frac{x}{x}=kC^{\frac{1}{n}}$

$$\Rightarrow\log\frac{x}{m}=\log k+\frac{1}{n}\log C$$

$$\Rightarrow\log(0.15)=\log k+(1)\left(\log10^{-1}\right)\quad\because\text{ given slope, }\frac{1}{n}=1$$

$$\Rightarrow\log0.15-\log10^{-1}=\log k$$

$$\Rightarrow\log\left(\frac{0.15}{10^{-1}}\right)=\log k$$

$$\Rightarrow\log(1.5)=\log k$$

$\Rightarrow$ k = 1.5

12. In a solvent **S**, a compound **B** is partially dissociated into **C** and **D** as given below:

$$\mathbf{B} \rightleftharpoons 2\mathbf{C} + 2\mathbf{D}$$

B, **C** and **D** are non-volatile in nature. The molar mass of **B** is 10 times the molar mass of **S**. The standard boiling point and the standard enthalpy of vaporization of **S** are 400 K and 10 R J mol^{-1}, respectively (R is the gas constant in J K^{-1} mol^{-1}). A solution of **B** in **S** with an initial concentration of **B** as 0.25% (mass/mass) has a boiling point of 408 K at 1 bar pressure. In this solution, the mole percent of **B** that has been dissociated is _____.

Ans 33.16 or 33.17 or 33.33

Given: $B \rightleftharpoons 2c + 2D$

$M_B = 10 \times M_s$

$T^0 = 400$ K

$\Delta_v H = 10$ R J. mol^{-1}

n = 4

$T_{solution} = 408$ K.

$\Delta T_b = 408 - 400 = 8$ K

$$K_b = \frac{RT_0^2 \times M_s}{1000 \times \Delta_v H} = \frac{R \times 400K \times (M_B/10)}{1000 \times 10R} = 1.6M_B$$

$\Delta T_b = iK_bm$

$$\Rightarrow 8 = i \times (1.6\ M_B) \times \frac{(0.25g/M_B)}{99.75 \times 10^{-3}\ kg}$$

$$\Rightarrow i = \frac{8 \times 99.75 \times 10^{-3}}{1.6 \times 0.25} = 1.995$$

$1 + (n - 1)\alpha = 1.995$ $\quad\quad$ $\therefore i = 1 + (n - 1)\alpha$

$1 + (4 - 1)\alpha = 1.995$ $\quad\quad$ If Assuming, dilute solution

$3\alpha = 0.995$ $\quad\quad$ $i = \frac{8 \times 100 \times 10^{-3}}{1.0 \times 0.25} = 2$

$\alpha = 0.33167$ $\quad\quad$ $1 + 3\alpha = 2$

$3\alpha = 1$

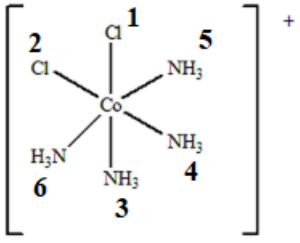
$\alpha = \frac{1}{3}$

% of α = 33.16 or 33.17 $\quad\quad$ % of α = 33.33

13. Consider that the coordinating atoms of the ligands in cis-$[Co(NH_3)_4Cl_2]Cl$ and mer-$[Co(NH_3)_3Cl_3]$ octahedral complexes are at the vertices of an octahedron. The sum of total number of the triangular faces in both the complexes having one N atom and two Cl atoms at their corners is _____.

Ans 6.00

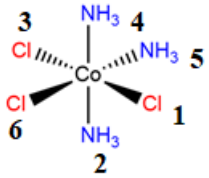
Cis – $[Co(NH_3)_4Cl_2]Cl$



cis

Triangular face having 2Cl and 1N is (1, 2, 3) and (1, 2, 4)

Mer – $[Co(NH_3)_3Cl_3]$



meridional isomer

Triangles having 2Cl and 1N is (1, 2, 3); (1, 3,4); (1, 3, 5); (1, 3, 6)

14. In the following reaction sequence, major products **X** and **Y** are acyclic monomers.

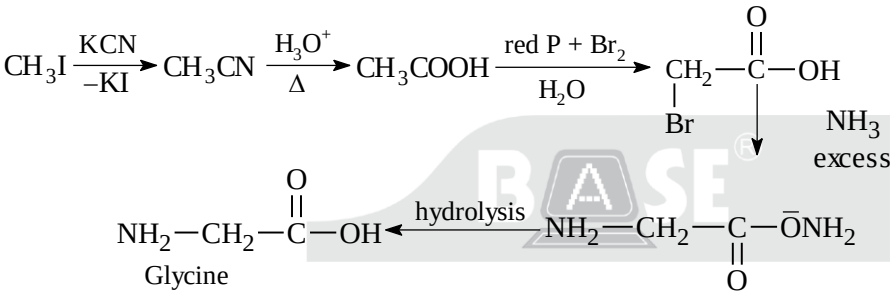
$$CH_3I \xrightarrow[\text{2. } H_2O^+, \Delta \text{ 3. Red P, } Br_2 \text{ 4. } NH_3\,(\text{excess})]{\text{1. KCN}} \mathbf{X}$$

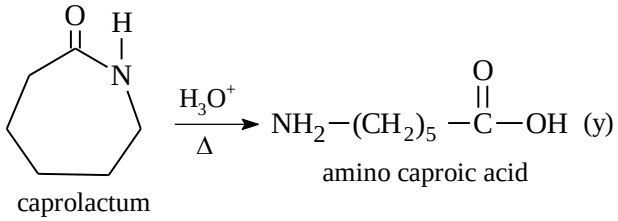
$$\text{Caprolactam} \xrightarrow[\Delta]{H_3O^+} \mathbf{Y}$$

500 mol of **X** completely reacts with 500 mol of **Y** to give 1 mol of a single biodegradable acyclic copolymer **Z** as the only product. The amount of **Z** formed in grams is _____.

Given: Atomic mass (in amu): H : 1, C : 12, N : 14, O : 16, Br : 80

Ans 85081.00





Step 3: Polymer formation

500 mol X + 500 mol Y react to form 1 mol of polymer.

Total monomer units = 500 + 500 = 1000

Since a single polymer chain is formed, number of condensation reactions:

= 1000 − 1= 999

Each condensation eliminates 1 molecule of H2O.

Step 4: Molar masses

For X (glycine):

Formula = C2H5NO2

Molar mass = 75 g mol^{-1}

For Y (6-aminohexanoic acid):

Molar mass = 131 g mol^{-1}

Total mass of monomers = 500 × 75 + 500 × 131 = 37500 + 65500 = 103000 g

Mass of water eliminated = 999 × 18 = 17982 g

Mass of polymer formed: = 103000 – 17982 = 85018 g

Section 4

Stem - 1

Question Stem for Question Nos. 15 and 16 (truncate/round off to two decimal places)

Two volatile liquids **A** and **B** form an ideal solution. Consider a 5 molal solution of **B** in **A** inside a closed container having a total vapour pressure of 100 mm Hg at 300 K. The vapour pressure of pure **A** at 300K is 105 mm Hg. Assume that **A** and **B** behave as ideal gases in the vapour phase.

Given:

The gas constant R = 0.08 L atm K^{-1} mol^{-1}

Molar mass of **A** is 50 g mol^{-1}

Molar mass of **B** is 57 g mol^{-1}

Density of liquid **B** at 300 K is 0.5 g/mL

1 atm = 760 mm Hg

15. At 300 K, the ratio of the molar volume of pure **B** in vapour phase to its molar volume in liquid phase is _____.

Ans 2000.00

For pure B in vapour phase:

From Raoult's law:

$P_B = X_B \times P_B°$

$16 = 0.2 \times P_B°$

$P_B° = 80$ mm Hg

Convert to atm:

P = 80/760 = 0.1053 atm

Using ideal gas equation for molar volume:

$V_m = RT/P = (0.08 \times 300)/0.1053 = 24/0.1053$

≈ 228 L mol^{-1}

For liquid B:

Density = 0.5 g mL^{-1}

Molar mass = 57 g mol^{-1}

Molar volume = Molar mass / Density

$V_{liq} = 57/0.5 = 114$ mL $mol^{-1} = 0.114$ L mol^{-1}

Ratio = $V_{vapour} / V_{liquid} = 228 / 0.114 = 2000$

16. The mole fraction of B in vapour phase which is in equilibrium with this solution is _____.

Ans 0.16

5 moles $\rightarrow$ 5 moles of B in 1000 g of A

$$n_A = \frac{1000}{50} = 20$$

$$\chi_B = \frac{5}{25} = \frac{1}{5} \quad \chi_A = \frac{4}{5}$$

$$p_t = \chi_A p_A^0 + \chi_B p_B^0$$

$$100 = \frac{4}{5} \times 105 + \frac{1}{5} \times p_B^0$$

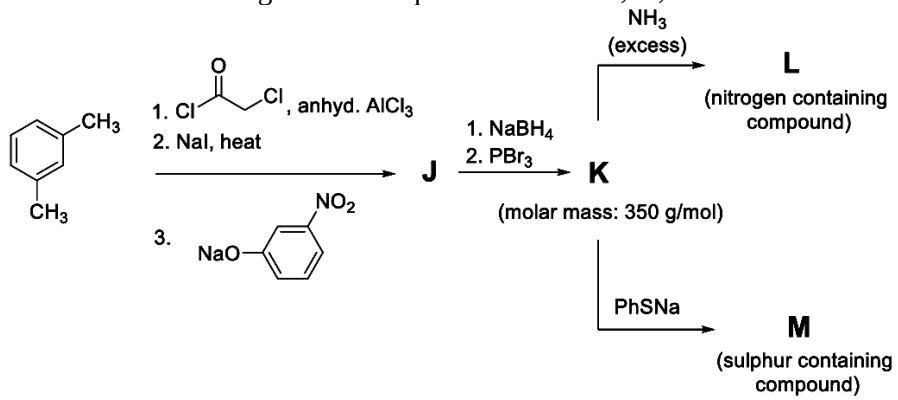
$$p_B^0 = 80\,\text{mm Hg}$$

$$y_B = \frac{p_B}{p_T} = \frac{\frac{1}{5} \times 80}{100} = 0.16$$

Stem - 2

Question Stem for Question Nos. 17 and 18 (truncate/round off to two decimal places)

Consider the following reaction sequence in which **J**, **K**, **L** and **M** are the major products.

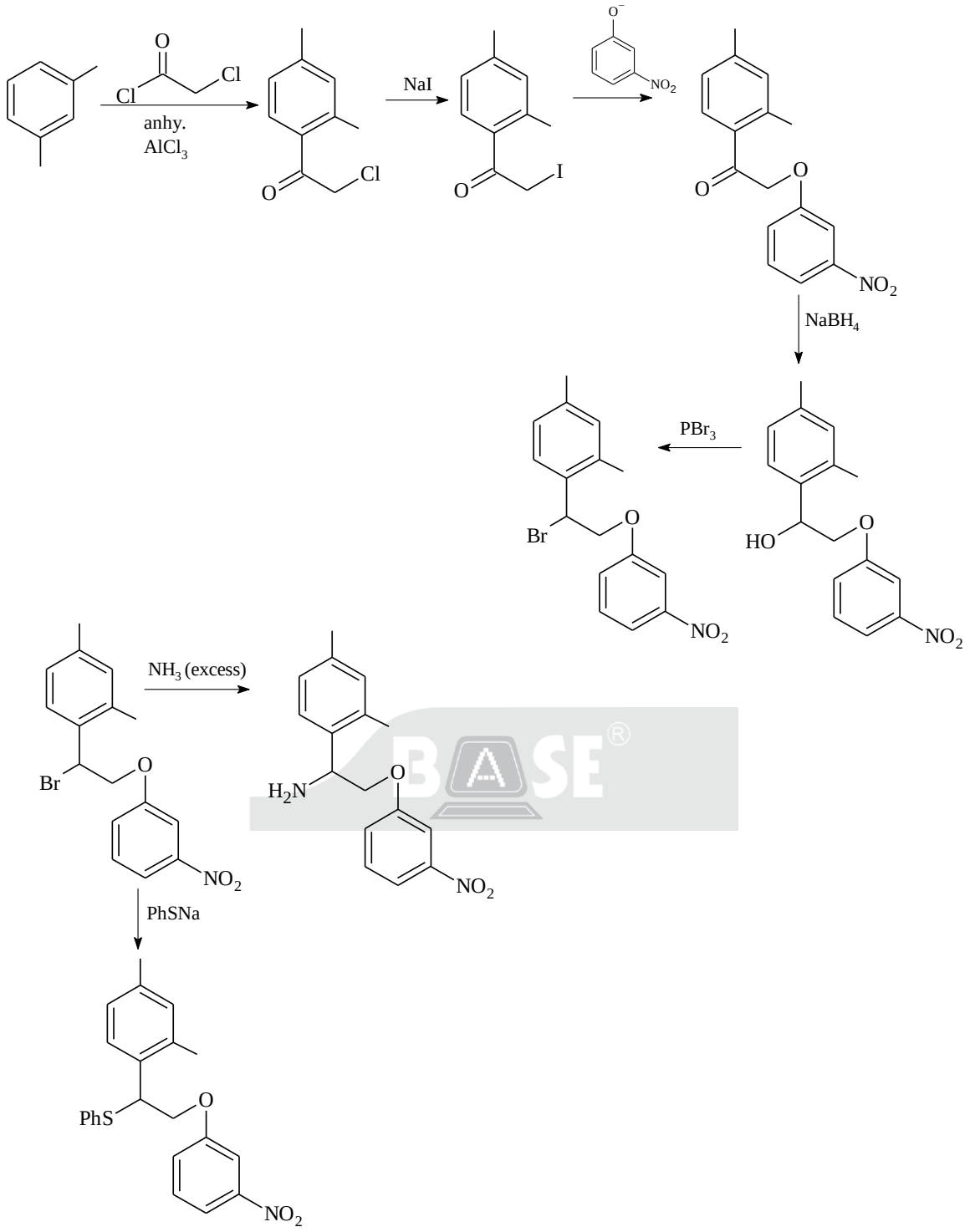


Given:

Atomic mass (in amu): H : 1, C : 12, N : 14, O : 16, S : 32, Br : 80, Ba : 137

17. The volume of 1 M aqueous H_2SO_4 required to completely neutralize the ammonia evolved from 5.72 g of L in Kjeldahl's method of nitrogen estimation is _____ mL.
Ans 10.00

18. In sulphur estimation by Carius method, the amount of $BaSO_4$ formed from 3.79 g of M is _____ g.
Ans 2.33



Solution for Question No. 17

mol. wt. L = 286

1 mole of L $\rightarrow$ 1 mole of N-atom

0.02 moles $\rightarrow$ 0.02 moles of N-atom = 0.02 mole of NH_3

$2NH_3 + H_2SO_4 \rightarrow (NH_4)_2SO_4$

2 moles 1 moles

0.02 mole [0.01 mole]

$n_{moles} = M \times V$

$\therefore V = 0.01\ V$

$V = 10$ mL

Solution for Question No. 18

Mol. wt of M = 379 g mol^{-1}

$n_{moles} = 10^{-2}$

mol. wt of $BaSO_4$ = 233.39 g mol^{-1}

1 mole of compound $\rightarrow$ 1 mole of SO_4^{2-}

1 mole of $BaSO_4$

$\therefore\ 233.39 \times 10^{-2}$

$\therefore\ W_{BaSO_4} = 2.33$ g.

* * *