

# **ANSWER KEY**

**SECOND YEAR HIGHER SECONDARY EXAMINATION MARCH 2022**

**PART-I/II/III**

**SUBJECT: CHEMISTRY**

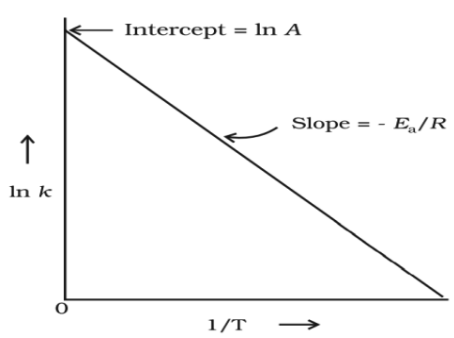
**CODE NO: SY 25**

**60 SCORES**

**VERSION:**

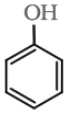
**2 HOURS**

<b>Qn. No.</b>	<b>Sub Qns</b>	<b>Answer Key/Value Points</b>	<b>Score</b>	<b>Total Score</b>
1		AgBr	1	1
2		Isotonic solutions	1	1
3		Kohlrausch law	1	1
4		s <sup>-1</sup> or (b)	1	1
5		Emulsions or (a)	1	1
6		Froth Flotation or (d)	1	1
7		Sandmeyer Reaction or (b)	1	1
8		Lucas reagent/ Con.HCl & anhydrous ZnCl <sub>2</sub>	1	1
9		Fuel cells	1	1
10		2,4,6- tribromoaniline/ structure of 2,4,6-tribromoaniline/ tribromoaniline	1	1
11		-CO-NH- or (c)	1	1
12		Bakelite or (a)	1	1
13		Aspartame/ any other given option	1	1

Qn. No.	Sub Qns	Answer Key/Value Points	Score	Total Score
14		Correct explanation (F-centres only- 1 score)	2	2
15		Statement/ correct equation Any one application	1 1	2
16	(i)  (ii)	<p>Correct equation(exponential/ logarithmic)</p>  <p style="text-align: center;"><b>Or</b></p> <p style="text-align: center;">slope = <math>-\frac{Ea}{R}</math> or <math>-\frac{Ea}{2.303R}</math></p> <p>(Graph without marking slope - ½ score)</p>	1          1	2
17		Definition Any one consequence	1 1	2
18		<p><math>\text{Cr}^{3+} \text{ d}^4 \rightarrow \text{d}^3</math> half filled <math>t_{2g}</math></p> <p><math>\text{Mn}^{3+} \text{ d}^4 \rightarrow \text{d}^5</math> half filled <math>\text{d}^5</math></p> <p>(stability due to half filled orbital - 1 score)</p>	1  1	2
19		Explanation  Equation	1  1	2



23	(i)	Any two factors	$\frac{1}{2} + \frac{1}{2}$	3
	(ii)	$k = \frac{2.303}{t} \log \frac{[R]_0}{[R]}$	1	
		$t_{1/2} = \frac{2.303}{k} \log 2$	$\frac{1}{2}$	
		$t_{1/2} = \frac{0.693}{k}$	$\frac{1}{2}$	
24	(i)	$\text{CH}_3\text{-CH}_2\text{-Br} + \text{NaI} \rightarrow \text{CH}_3\text{-CH}_2\text{-I} + \text{NaBr}$ / Finkelstein reaction/ any other correct method	1	3
	(ii)	$\text{S}_{\text{N}}1$	1	
		First order kinetics / takes place in two steps / carbocation intermediate / racemisation / correct mechanism	1	
25	(i)	R-MgX / Alkyl magnesium halides/ suitable example	1	3
	(ii)	statement	1	
		example	1	
26	(i)	Intermolecular H bonding/ H bonding	1	3
	(ii)	Acetylsalicylic acid/ 2-acetoxybenzoic acid/ structure of aspirin/ analgesic/ pain killer	1	
		correct equation/ acetylation of salicylic acid	1	

27	(i)	 or name + CH <sub>3</sub> I or name	$\frac{1}{2} + \frac{1}{2}$	3
	(ii)	Definition/ explanation	1	
		example	1	
28	(i)	Definition	1	4
	(ii)	Electrode reactions	1+1	
		Total cell reaction	1	
29	(i)	Correct distinction	1+1	4
	(ii)	Definition	1	
		Anyone application - ultramicroscope	1	
30	(i)	3 steps involved in leaching (equation/ explanation)	1+1+1	4
	(ii)	Correct reason	1	
31	(i)	Definition	1	4
		Example	1	
	(ii)	Definition / animal starch	1	
	(iii)	Amylose and amylopectin/ polymer of $\alpha$ - glucose	$\frac{1}{2} + \frac{1}{2}$	

32	(i)	Two differences/ one difference and example of each type	1+1	4
	(ii)	chloroprene/ 2-Chlorobuta-1,3-diene $\begin{array}{c} \text{Cl} \\   \\ \text{CH}_2=\text{C}-\text{CH}=\text{CH}_2 \end{array}$	1 1	
33	(i)	Definition/ explanation of each  examples of each	1+1  $\frac{1}{2}+\frac{1}{2}$	4
	(ii)	BHT/ BHA/ suitable examples	1	
34	(i)	$\text{PCl}_5 \rightarrow \text{PCl}_3 + \text{Cl}_2$	1	6
	(ii)	Definition  Any two examples/ any two types	1  $\frac{1}{2}+\frac{1}{2}$	
	(iii)	Correct 3 steps	1+1+1	
35	(i)	Figure of two geometrical isomers	1+1	6
	(ii)	Four types of structural isomerism/ Explanation of suitable example of each isomer	4	
36	(i)	H-COONa or name + CH <sub>3</sub> -OH or name	1+1	6
	(ii)	Correct explanation/ equation	2	
	(iii)	Any correct reagents and condition $[\text{CrO}_2\text{Cl}_2, \text{NaOH}/\Delta \text{ or } \text{CrO}_2\text{Cl}_2, \text{H}_3\text{O}^+/\Delta] / [\text{CrO}_3, (\text{CH}_3\text{CO})_2\text{O}, \text{NaOH}/\Delta \text{ or } \text{CrO}_3, (\text{CH}_3\text{CO})_2\text{O}, \text{H}_3\text{O}^+/\Delta] / [\text{Cl}_2/h\nu, \text{NaOH}/\Delta \text{ or } \text{Cl}_2/h\nu, \text{H}_3\text{O}^+/\Delta]$ Name of reaction	2	

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