

ANSWER KEY

Code No

FX 425


I YEAR HIGHER SECONDARY EXAMINATION MARCH 2023

PART-I/II/III

SUBJECT: CHEMISTRY60 SCORES2 HOURS

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
1		5	1	1
2		Unnilquadium/Rutherfordium/Any related Response	1	1
3		F ⁻	1	1
4		3-Hydroxypentanal	1	1
5		Staggered	1	1
6	i.	Definition of molarity/equation	1	2
	ii	Correct statement	1	
7		$\lambda = \frac{h}{mv}$ or $\lambda = \frac{h}{P}$	1	2
		Explanation of any 2 terms	1	
8	i	$n=3$ $l=0$	$\frac{1}{2} + \frac{1}{2}$	2
	ii	Correct answer or (b)	$\frac{1}{2}$	
		Hund's Rule	$\frac{1}{2}$	
9	i	Statement of modern periodic law	1	2
	ii	Increases	1	
10	i	Correct Definition	1	2
	ii	Correct Reason	1	

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Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
11		Statement of Hess's Law	1	2
		Illustration or one example	1	
12	i	Correct definition of acid and base as per Bronsted Lowry concept	$\frac{1}{2} + \frac{1}{2}$	2
	ii	Definition of p^H / Equation	1	
13		Definition of decomposition reaction	1	2
		Correct example	1	
14		Buta-1,3-diene 1,3-Butadiene	1	2
		9 sigma bonds and 2 π bonds	$\frac{1}{2} + \frac{1}{2}$	
15	i	Cyclohexane  C_6H_{12}	1	2
	ii	Butane / $CH_3CH_2CH_2CH_3$ / $C_2H_5-C_2H_5$ / C_4H_{10}	1	
16	i	Correct relation / $M \cdot F = n \times EF$	1	3
	ii	Correct equation (1) Correct Answer	2	
17		3 Observations ($\frac{1}{2} \times 3$)	$1\frac{1}{2}$	3
		3 conclusions ($\frac{1}{2} \times 3$)	$1\frac{1}{2}$	
18	i	Correct Reason	1	3
	ii	Any related response	1	
	iii	Correct Reason	1	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
19	i	Definition of Dipole moment or equation	1	3
	ii	Correct reason or correct diagram with direction of dipole moment	2	
20	i	Statement of Octet rule	1	3
	ii	Any two drawbacks	1+1	
21	i	Statement/explanation/equation related to II Law of Thermodynamics	1	3
	ii	Definition of entropy	1	
	iii	Correct Relation	1	
22	i	Definition of Buffer solution	1	3
	ii	one example of acidic buffer	1/2	
		one example of basic buffer	1/2	
iii	Definition of Common ion effect	1		
23	Assigning correct ox. No. (2) OR oxidation Half (1) Reduction Half (1)		2	3
	Balanced equation (can be balanced by ox. No. method or Half reaction method)		1	
24	i	Detection of Nitrogen	1 1/2	3
	ii	Detection of Sulphur	1 1/2	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
25.	i	2-Bromopropane	1	3
	ii	Markonikov's Rule	1	
		Statement of the rule	1	
26.	i	Correct explanation / equation	1	3
	ii	Correct explanation / equation	1	
	iii	Correct explanation / equation	1	
27	i	Any 4 spectral line series name	2	4
	ii	Any 2 limitations	2	
28	i	Any 2 features of M.O Theory	2	4
	ii	I-d, II-a, III-b, IV-c	$\frac{1}{2} \times 4 = 2$	
29.	i	Definition of standard enthalpy of formation	1	4
	ii	Correct equation for $\Delta_f^\circ \text{H}_{\text{CH}_3\text{OH}}$	1	
		Correct steps	1	
		Correct answer	1	
30	i	Definition / explanation of Homogeneous Equilibria	1	4
		One example	1	
	ii	$K_p = K_c (RT)^{\Delta n} / \Delta n = 0 / K_p = K_c / K_p = K_c RT$	2	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
31	i	Name of any two pur purification methods	1/2 + 1/2	4
	ii	Distillation under reduced pressure / Distillation	1	
	iii	Definition / explanation of electromeric effect	1	
		Name of two types	1/2 + 1/2	

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