

DEPARTMENT OF GOVERNMENT EXAMINATIONS.
HIGHER SECONDARY FIRST YEAR EXAMINATION – MARCH 2025.
CHEMISTRY KEY ANSWERS – ENGLISH MEDIUM

Maximum Marks = 70

- Note :** 1. Answers written only in BLUE or BLACK should be evaluated.
 2. In Part – I the correct answer should have been written with option code.

PART – I

Answer **all** the Questions :-

15×1=15

A Type			B Type		
Q.No	option	Answer	Q.No.	option	Answer
1.	(c)	NH_4Cl	1.	(b)	Both Assertion and Reason are true and Reason is the correct explanation of Assertion
2.	(b)	acetaldehyde	2.	(b)	Propene
3.	(a)	P	3.	(d)	- 3227 kJmol ⁻¹
4.	(a)	Staggered > Skew > Eclipsed	4.	(a)	bio - magnification
5.	(c)	3	5.	(a)	Staggered > Skew > Eclipsed
6.	(d)	-3227 kJmol ⁻¹	6.	(d)	17
7.	(b)	Kerosene	7.	(c)	NH_4Cl
8.	(c)	Glucose	8.	(a)	P
9.	(a)	Argon	9.	(c)	$(RT)^2$
10.	(d)	17	10.	(a)	Argon
11.	(c)	$C_6H_5NH_3^+$	11.	(b)	acetaldehyde
12.	(b)	Propene	12.	(b)	Kerosene
13.	(a)	bio - magnification	13.	(c)	3
14.	(c)	$(RT)^2$	14.	(c)	Glucose
15.	(b)	Both Assertion and Reason are true and Reason is the correct explanation of Assertion	15.	(c)	$C_6H_5NH_3^+$

Answer **Any SIX** Questions Question **No. 24** is Compulsory

Q.No.	ANSWER	Marks
16.	Correct definition (or) Formula	2
17.	Correct statement (or) Mathematical Form $\Delta x \text{ ---- } \frac{1}{2}$ $\Delta P \text{ ---- } \frac{1}{2}$	2
18.	Covalent hydride = 3 types 2 types ----- $1\frac{1}{2}$ 1 type ----- 1	2
19.	$V \propto n$ (or) $\frac{V_1}{n_1} = \frac{V_2}{n_2} = \text{constant}$	2
20.	Correct statement (or) $\lim_{T \rightarrow 0} S = 0$	2
21.	Correct explanation	2
22.	Correct explanation Any Example ----- 1	2
23.	Correct definition	2
24.	$N_{2(g)} + 3H_{2(g)} \rightleftharpoons 2NH_{3(g)}$ (or) $K_c = \frac{[NH_3]^2}{[N_2][H_2]^3}$ $= \frac{1.8 \times 10^{-2} \times 1.8 \times 10^{-2}}{1.2 \times 10^{-2} \times 3 \times 10^{-2} \times 3 \times 10^{-2} \times 3 \times 10^{-2}}$ $= 1 \times 10^3 L^2 mol^{-2}$ (or) $1 \times 10^3 M^{-2}$	1 $\frac{1}{2}$ $\frac{1}{2}$

PART - III

Answer **Any SIX** Questions Question **No. 33** is Compulsory

6×3=18

Q.No.	Key answer	Marks
25.	(i) 46 (or) 46u (or) 46g (ii) 180 (or) 180u (or) 180g	1½ 1½
26.	Pauling assigned arbitrary value of EN for H and F as 2.1 and 4.0 $(\chi_A - \chi_B) = 0.182 \sqrt{E_{AB} - (E_{AA} \times E_{BB})}^{\frac{1}{2}}$ Explanation of E_{AB}, E_{AA}, E_{BB} (Any Two) ---- 1	1 2
27.	Any Three Methods	3
28.	Cannot be liquefied No inter molecular forces of attraction (or) behaves ideally	2 1
29.	Any Three limitations	3
30.	Correct Explanation	3
31.	Isomerism - Definition Any Two types	2 1
32.	3 uses	3
33.	4 equations 3 equations ----- 2½ 2 equations ----- 2 1 equation (or) Explanation only ----- 1	3

PART – IV

Answer **all** the Questions :-

5×5=25

Q.No.	Answer	Marks
34 (a)	(i) Correct Definition Any one value of molar volume -----1 (ii) Any 3 limitation (OR)	2 3
(b)	(i) Correct explanation (ii) In Group – decreases In Period – increases	2 1½ 1½
35 (a)	Any Two biological importance of Calcium Any Three biological importance of Magnesium (OR)	2 3

(b)	Born – Haber cycle - Diagram	2
	ΔH_f , ΔH_1 , ΔH_2 , ΔH_3 , ΔH_4 and U Terms Explanation (Any 4)	2
	$\Delta H_f = \Delta H_1 + \Delta H_2 + \frac{1}{2}\Delta H_3 + \Delta H_4 + U$ (or) $U = (\Delta H_f) - (\Delta H_1 + \Delta H_2 + \frac{1}{2}\Delta H_3 + \Delta H_4)$	1
36 (a)	Correct explanation for (i) to (v)	5
	(OR)	
(b)	Statement of Raoult's law (or) $P_A \propto x_A$ (or) $P_A = k x_A$ } (or) $P_A = P_A^\circ x_A$	1
	$P_B = P_B^\circ x_B$	1
	$P_{\text{total}} = P_A + P_B$ (or) $P_{\text{total}} = x_A P_A^\circ + x_B P_B^\circ$	1
	$x_A + x_B = 1$ or $x_A = 1 - x_B$	1
	$P_{\text{total}} = (1 - x_B) P_A^\circ + x_B P_B^\circ$ (or) $P_{\text{total}} = P_A^\circ + x_B (P_B^\circ - P_A^\circ)$	1
37 (a)	Electronic configuration of Oxygen atom	1
	MO diagram (or) Electronic configuration of O ₂ molecule	2
	Bond order = 2	1
	Para Magnetic (or) Two unpaired electrons	1
	(OR)	
(b)	(i) (I) 2-hydroxybutanal	1
	(II) 4-chloropent-2-yne	1
	(ii) (I) A=cyclohexane (or) C ₆ H ₁₂ (or) structure	1½
	(II) B=p-Benzo quinone (or) 1,4-Benzo quinone (or) quinone (or) structure	1½
38 (a)	(i) Correct equation with catalyst	1½
	Without catalyst (or) Explanation only ----- 1	
	(ii) Correct equation with catalyst	
	Without catalyst ----- 1½	2
	Explanation only ----- 1	
	(iii) Correct equation with condition	1½
	Without condition (or) Explanation only ----- 1	
	(OR)	
(b)	(i) Correct equation with condition	1½
	Without condition (or) Explanation ----- 1	
	(ii) Correct equation with condition	
	Without condition ----- 1½	2
	Explanation only ----- 1	
	(iii) Correct equation	1½
	Explanation only ----- 1	