

## Scoring Indicators

Question Number	Scoring Indicators	Detailed score	Total Score
1	Froth Floatation	1	1
2	2	1	1
3	(ii) Cu act as the cathode	1	1
4	Coagulation/flocculation/Precipitation	1	1
5	20% (w/w)	1	1
6	First order/one	1	1
7	(ii) 1M Na <sub>2</sub> SO <sub>4</sub>	1	1
8	2000	1	1
9	$\Lambda_m = \frac{K \times 1000}{M} = 124 \text{ Scm}^2 \text{ mol}^{-1}$ Correct equation Correct answer	1 1	2
10	Statement of Henry's Law One application	1 1	2
11	Definition Example	1 1	2
12	Metal excess defect due to anion vacancy/F-centre	2	2
13	Any two difference	2	2
14	Formula = AB <sub>3</sub> For the calculation of no. of atoms of A, B one score each	2	2
15	i) Ferromagnetism Example ii) Antiferromagnetism Example	½ ½ ½ ½	2
16	a) Half b) For correct expression	1 1	2
17	Kohlrausch's law Statement	1 1	2
18	$K = \frac{2.303}{t} \log \frac{R_0}{R}$ $= \frac{2.303}{1.75 \times 10^{-3}} \log \frac{5}{3} = 292 \text{ S}$	1 1	2
19	Two requirements	2	2

20	Presence of salt produce more no. of H <sup>+</sup> ions that enhances cathodic reduction	2	2
21	Importance of Ellingham diagram (any two points)	2	2
22	a) Negative deviation b) Plotting graph	1 2	3
23	Explanation to a, b, c ( one score each)	3	3
24	explanation of conductors insulators and semi conductors using band theory one score each / diagrammatic representation of the bands in them	3	3
25	Oxidation electrode – A Reduction Electrode – B Standard EMF = 1.1v	1 1 1	3
26	For differences For each example	2 ½ + ½	3
27	For calcination For roasting For examples	1 1 ½ + ½	3
28	For diagram and labelling For anode reaction For cathode reaction	1 1 ½ + ½	3
29	Definition of azeotropes two Types of azeotropes ½ each example for each type ½ each	1 1 1	3
30	(a) For reason (b) For equation	2 2	4
31	Types of catalysis Any two characteristics	2 2	4
32	$K = A e^{-E_a/RT}$ For Arrhenius equation and terms $\log \frac{K_2}{K_1} = \frac{E_a}{2.303R} \left[ \frac{T_2 - T_1}{T_1 T_2} \right]$ For correct equation For correct answer	2  ½ ½	3
33	a) Bauxite b) Three stages of leaching ( 1 score for each step)	1 3	4