



MARK:20

GRADE:12

TIME:1HR

CHEMISTRY

SECTION A		
1.	Which molecule shows optical activity? a)2- chloro butane b)1- chloro butane c)2,2 dichloro butane d)2,3 dichloro butane	1
2	How many faraday is required to convert one mole of MnO_4^- to Mn^{2+} ? a) 2 F b)5 F c) 3 F d) 4 F	1
3	Which is the element formed at the cathode when aqueous Na Cl is electrolysed? a) H_2 b)Na c) Cl_2 d) O_2	1
4	Which compound has more boiling point? a) 2 chloro butane b)1 chloro butane c)1 bromo butane d)2 bromo 2 methyl propane	1
5	Methyl chloride is more reactive than chlorobenzene.Which of the following statements is the wrong reason? a) $C-Cl$ bond is single in first case while in other it is partial double bond b)Hybridisation of methyl chloride is sp^2 which has more s character c)Hybridisation of methyl chloride is sp^3 which has 25% s character. d)instability of phenyl cation	1
SECTION B		
6	Write the major and minor product formed when 2 bromo butane is treated with alcoholic KOH and the rule behind it.	2
7	Write the anodic and cathodic reactions in a lead accumulator.	2
8	Explain the reason why KCN and AgCN produce different products when treated with CH_3Br ?	2
SECTION C		

9	<p>a) Why conductivity of CH₃COOH decreases on dilution?</p> <p>b) Calculate ΔG^0 for the reaction $2Fe^{3+} + 2I^- \rightleftharpoons I_2 + 2Fe^{2+}$. $E^0 = 0.236 V$.</p> <p>a) Write Wurtz Fitting reaction</p> <p>b) Write any 2 applications of Kohlraush's law.</p>	1+2
11	<p>a) Although chlorine is -I group, it is ortho para directing. Why?</p> <p>b) Calculate λ_{0m} of NH₄OH if λ_{0m} of NH₄Cl = 131 S cm² mol⁻¹ λ_{0m} of Na OH = 91 S cm² mol⁻¹, λ_{0m} of Na Cl = 154 S cm² mol⁻¹</p>	1+2
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