YEAR 13 A/ B – CHEMISTRY

WEEK 2 (29th March to 2nd April)

Work sent to the students through Whats app group / Google classroom /Zoom Learning Platform

Lessson Objective: Revise electrochemistry, redox reactions and basic calculations

Resources: Text book, Worksheet file, video, past papers and power point presentations.

| Read textbookSolve past papers. Complete worksheet file questions.Tuesday – 1st & 2nd period (Yr 13 A)Tuesday – 1st & 2nd period (Yr 13 A)Understand redox reactions for the interconversion of the oxidation states of vanadium (+5, +4, +3 and +2), in terms of the relevant E^0 values.Explain and write equations for the reaction of - dichromate(VI) ion, Cr_2O7^2 to Cr^{3+} and Cr^{2+} ions using zinc in acidic conditions. - dichromate(VI) ion, Cr_2O7^2 to Cr^{3+} and Cr^{2+} ions using zinc in acidic conditions. - dichromate(VI) ion, Cr_2O7^2 to Cr^{3+} using hydrogen peroxide.Explain disproportionation reactions using the standard electrode potential values. Read textbookWednesday – 2nd period-Yr 13 A Wednesday – 4th , 5th & 6th period -Yr 13 BWednesday – 4th , 5th & 6th period -Yr 13 BWethe equations involved in the working of different fuel cells. Use the equation ΔS total = nFEcell, and lnK= Δ S total/ R = nFEcell/R to do calculation and g the relation between Ecell and S. | Sunday – 4 th , 5 th & 8 th period (Yr 13 A) Sunday – 1 st , 2 nd & 3 rd period (Yr 13 B) | Interpret the reactions of transition metal ions with aqueous sodium hydroxide and aqueous ammonia, both in excess, limited to reactions with aqueous solutions of $Cr^{3+}(aq)$, $Fe^{2+}(aq)$, $Fe^{3+}(aq)$, $Co^{2+}(aq)$ and $Cu^{2+}(aq)$ Calculations in a problem solving context, e.g. % of Fe in an iron tablet; cleaning solutions, % of copper in an alloy, etc. |
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| Wednesday – 4 th , 5 th & 6 th period -Yr 13 B Write the equations involved in the working of different fuel cells. Use the equation ΔS total = nFE _{cell} , and lnK= ΔS total/ R = nFE _{cell} /R to do calculation and go the relation between E _{cell} and S. | Wednesday -2^{nd} period-Yr 13 A | Write the steps in the procedure, note the end point and using the redox equation to do calculations for |
| | Wednesday – 4 th , 5 th & 6 th period -Yr 13 B | different redux equation to do calculations for different redux reactions. Write the equations involved in the working of different fuel cells. Use the equation $\Delta S_{\text{total}} = nFE_{\text{cell}}$, and $\ln K = \Delta S_{\text{total}} / R = nFE_{\text{cell}} / R$ to do calculation and get the relation between E_{cell} and S. |

| Read textbook |
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