

## YEAR 13 A /B –CHEMISTRY

**WEEK 7 ( 11<sup>th</sup> Oct to 15<sup>th</sup> Oct)**

**Topic: Acid and Base equilibrium.**

**Work sent to the students through Google classroom / Zoom Learning Platform**

**Resources:** Text book, Worksheets, video, power point presentations.

Date	Topic	
<p>11.10.20 Sunday <b>1-13A</b> <b>4-13B</b></p> <p><b>Mode of Teaching –</b> Zoom</p>	<p><b>Lesson Objective:</b> - draw and interpret titration curves using any combination of strong and weak monobasic acids and monoacid bases</p> <p>- select a suitable indicator, using a titration curve and suitable data.</p> <p><b>Success Criteria:</b> - draw and interpret titration curves using any combination of strong and weak monobasic acids and monoacidic bases from the given experimental data.</p> <p>Explain Indicators change colour at a pH of around +/-1 their pK<sub>In</sub> value.</p> <p>Students will be able to consolidate their understanding of indicators by answering different types of past paper questions from the Edexcel website.</p> <p><b>Lesson Objective:</b> - draw and interpret titration curves using any combination of strong monobasic acids and a strong monoacidic bases</p>	<p>Teacher uses power point presentation that contains interactive questions.</p> <p>Students solve the worksheet file questions.</p>
<p>Sunday 11.10.20 <b>2-13 A</b></p>	<p>- select a suitable indicator, using a titration curve and suitable data.</p> <p><b>Success Criteria:</b> - draw and interpret titration curves using any combination of strong and strong monobasic acids and monoacidic bases from the given experimental data.</p> <p>Explain Indicators change colour at a pH of around +/-1 their pK<sub>In</sub> value.</p>	<p>Teacher uses power point presentation that contains interactive questions.</p> <p>Students solve the</p>

<p>13.10.20 Tuesday</p> <p><b>2-13B</b></p> <p><b>Mode of Teaching –</b> Zoom</p>	<p>Students will be able to consolidate their understanding of indicators by answering different types of past paper questions from the Edexcel website.</p>	<p>worksheet file questions.</p>
<p>Wednesday 14.10.20</p> <p><b>4- 13A</b> <b>2-13B</b></p> <p><b>Mode of Teaching –</b> Zoom</p>	<p><b>Lesson Objective:</b></p> <ul style="list-style-type: none"> <li>- Understand what is meant by the term ‘buffer solution’</li> <li>- understand the action of a buffer solution</li> <li>- calculate the pH of a buffer solution given appropriate data</li> <li>- calculate the concentrations of solutions required to prepare a buffer solution of a given pH</li> <li>- understand the roles of carbonic acid molecules and hydrogen carbonate ions in controlling the pH of blood.</li> </ul> <p><b>Success Criteria:</b></p> <ul style="list-style-type: none"> <li>-define buffer solution</li> <li>- explain buffer action</li> <li>- calculate the pH of buffer given appropriate data</li> <li>- calculate the concentrations of solutions required to prepare a buffer solution of a given pH</li> <li>- understand the roles of carbonic acid molecules and hydrogen carbonate ions in controlling the pH of blood.</li> </ul>	<p>Teacher uses power point presentation that contains interactive questions.</p> <p>Students solve the worksheet file questions .</p>

	<p>- Will be able to write the equations to show buffer action for an acidic buffer <math>\text{CH}_3\text{COOH}/\text{CH}_3\text{COO}^- \text{Na}^+</math> system and the alkaline buffer <math>\text{NH}_3/\text{NH}_4^+</math> system.</p>	
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**Homework :** Solve worksheet file questions and text book questions page 38.

## **YEAR 13 A/B– CHEMISTRY**

**WEEK 7 ( 11<sup>th</sup> Oct to 15<sup>th</sup> Oct)**

**Work Sent to the students through Zoom Learning Platform / Google classroom**

**Topic:– Standard Electrode potential**

**Resources:** Text book, Worksheet, Video , Board works , power point

Date	Topic	
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<p>11.10.20 Sunday 4 13A</p> <p>5 13B</p> <p><b>Mode of Teaching –</b> Zoom</p>	<p><b>Learning Objective:</b></p> <p>Reinforce what is meant by the term ‘standard electrode potential’, <math>E^\ominus</math>.</p> <p>Recall that the standard electrode potential, <math>E^\ominus</math>, refers to conditions of:</p> <ol style="list-style-type: none"> <li>298 K temperature</li> <li>100 kPa pressure of gases</li> <li>1.00 mol dm<sup>-3</sup> concentration of ions.</li> </ol> <p><b>Learning Outcome:</b></p> <p>Explain oxidation as increase in oxidation number and reduction as decrease in oxidation number.</p> <p>Define standard electrode potential for an electrode.</p> <p>Explain the conditions maintained for the standard electrode potentials in terms of temperature, pressure and concentrations.</p>	<p>Teacher uses textbook questions and power point to introduce the concept of electrode potential.</p>
<p>11 .10.20 Sunday 8 13B</p> <p>14.10.20 Wednesday 5 13A</p> <p><b>Mode of Teaching –</b> Zoom</p>	<p><b>Learning Objective:</b> Understand the features of the standard hydrogen electrode and understand why a reference electrode is necessary.</p> <p>Explain the different methods are used to measure standard electrode potentials of:</p> <ol style="list-style-type: none"> <li>metals or non-metals in contact with their ions in aqueous solution</li> <li>ions of the same element in different oxidation states.</li> </ol> <p><b>Learning Outcome:</b></p> <p>Discuss the setup of the standard electrode potential and its use as the reference.</p> <p>Predict how to measure, using a hydrogen electrode, standard electrode potentials of:</p> <ol style="list-style-type: none"> <li>metals or non-metals in contact with their ions in aqueous solution.</li> <li>ions of the same element in different oxidation states.</li> </ol>	<p>Teacher uses PowerPoint presentation and video to demonstrate the different half cells.</p> <p>Teacher uses worksheet that contains interactive questions, to explain the cell notation and half equations.</p>
<p>13.10.20 Tuesday 1 13B</p>	<p><b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>Predict feasibility of a reaction using standard electrode potential.</li> <li>Understand how disproportionation reactions relate</li> </ul>	<p>Instructions will be given to complete chapter questions.</p>

<p>14.10.20</p> <p>Wednesday <b>6 13A</b></p> <p><b>Mode of Teaching –</b> Zoom</p>	<p>to standard electrode potentials.</p> <p><b>Learning Outcome:</b></p> <ul style="list-style-type: none"> <li>• Understand the limitations of predictions made using standard electrode potentials.</li> <li>• Understand the importance of conditions when measuring the electrode potential.</li> </ul> <p>Reinforce the concepts such as</p> <ul style="list-style-type: none"> <li>• standard electrode potential and its use as the reference.</li> <li>• the different methods are used to measure standard electrode potentials.</li> <li>• Define electrochemical series.</li> </ul>	<p>Teacher uses past paper questions to assess the concept of whether a reaction is possible.</p>
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**HOMEWORK:** Solve textbook question page 95