

YEAR 13 A /B –CHEMISTRY

WEEK 8 (18th Oct to 22nd October)

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	
18.10.20 Sunday 1-13A 4-13B Mode of Teaching – Zoom	Lesson Objective: - ‘buffer solution’ - action of a buffer solution - roles of carbonic acid molecules and hydrogen carbonate ions in controlling the pH of blood. Success Criteria: students will be able to: -define buffer solution - explain buffer action with an appropriate example. - Will be able to write the equations to show buffer action for an acidic buffer $\text{CH}_3\text{COOH}/\text{CH}_3\text{COO}^-\text{Na}^+$ system and the alkaline buffer $\text{NH}_3/\text{NH}_4^+$ system. - understand the roles of carbonic acid molecules and hydrogen carbonate ions in controlling the pH of blood Lesson Objective: - calculation of: the pH of a buffer solution given appropriate data concentrations of solutions required to prepare a buffer solution of a given pH	Teacher uses power point presentation that contains interactive questions. Students solve the worksheet file questions.
Sunday 18.10.20 2-13 A	Success Criteria: students will be able to: - calculate the pH of buffer given appropriate data - show the buffer range in titration curve of weak acid and strong base.	Teacher uses power point presentation that contains interactive questions.
20.10.20 Tuesday 2-13B Mode of Teaching – Zoom	-explain the significance of half neutralization point in terms of buffer solution. -Evaluate K_a , K_b from titration curves of weak acid – strong base titrations. ii. determine K_a from the pH at the point where half the acid is neutralized. - calculate the concentrations of solutions required to prepare a buffer solution of a given pH	Students solve the worksheet file questions.

<p>Wednesday 21.10.20 4- 13A 2-13B Mode of Teaching – Zoom</p>	<p>Lesson Objective: -calculations to find pH of given buffer solutions, find the concentration of the different components needed to make a buffer of a given pH. -enthalpy changes of neutralization values for strong and weak acids.</p> <p>Success Criteria: students will be able to: -the concentrations of solutions required to prepare a buffer solution of a given pH. -Understand how to use a weak acid–strong base titration curve to demonstrate buffer action -Evaluate K_a, K_b from titration curves of weak acid – strong base titrations. -Understand why there is a difference in enthalpy changes of neutralization values for strong and weak acids. -Compare the enthalpy changes of neutralization values of strong acid- strong base and strong acid – weak base/ strong base – weak acid. Explain why the values are lower than -57.1kJmol^{-1}</p>	<p>Teacher uses power point presentation that contains interactive questions that helps to find the concentration.</p> <p>Students solve the worksheet file questions</p>
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Homework : Solve worksheet file questions and text book questions page 38.

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WEEK 8 (18th Oct to 22nd October)

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

Topic:– Redox titrations and storage cells

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

Date	Topic	
<p>18.10.20 Sunday 4 13A 5 13B Mode of Teaching – Zoom</p>	<p>Learning Objective: Be able to carry out both structured and non-structured titration calculations including $\text{Fe}^{2+}/\text{MnO}_4^-$, and $\text{I}_2/\text{S}_2\text{O}_3^{2-}$. Understand the methods used in redox titrations. Learning Outcome: Carry out redox titrations calculations in a problem solving context, e.g. % of Fe in an iron tablet; cleaning solutions, % of copper in an alloy, etc. Write the steps in the procedure, note the end point and using the redox equation to do calculations for different redox reactions.</p>	<p>Teacher uses textbook questions and power point to introduce the concept of redox titrations.</p> <p>Students solve worksheet questions on redox titrations.</p>
<p>18.10.20 Sunday</p>	<p>Learning Objective: Understand the application of electrode potentials to storage cells.</p>	<p>Teacher uses PowerPoint presentation and video or</p>

<p>8 13B</p> <p>21.10.2020 Wednesday 5 13A</p> <p>Mode of Teaching – Zoom</p>	<p>Discuss the working of storage cells using the standard potential values.</p> <p>Learning Outcome: Understand that the energy released on the reaction of a fuel with oxygen is utilized in a fuel cell to generate a voltage. Knowledge that methanol and other hydrogen-rich fuels are used in fuel cells is expected.</p>	<p>animation to demonstrate the working of storage cells Teacher uses worksheet that contains interactive questions, to</p>
<p>20.10.20 Tuesday 1 13B</p> <p>21.10.2020 Wednesday 6 13A</p> <p>Mode of Teaching – Zoom</p>	<p>Learning Objective: Reinforce the working of the methanol fuel cell and other fuel cells which use hydrogen –rich fuels to generate a voltage.</p> <p>Know the electrode reactions that occur in a hydrogen-oxygen fuel cell.</p> <p>Learning Outcome: Write the equations involved in the working of these fuel cells. Explain the working of the hydrogen- oxygen fuel cell to generate a voltage.</p>	<p>Instructions will be given to complete chapter questions.</p> <p>Teacher uses past paper questions to assess the concept of storage cells.</p>

HOMEWORK: Solve textbook question page 98