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| **Questions** | **Answers** |
| 1. What is the main objective of the buffer solution? | The main objective of a buffer solution is to resist changes in pH when small amounts of acid or base are added to it(2,5) |
| 2.How can you determine the oxidant and the reductor experimentally? | We put the metal in solution contains ions of another metal, the solution that causes the indicator to change color towards its reduced form is the oxidant, while the solution that causes the indicator to change color towards its oxidized form is the reductor. (3) |
| 3.What is the significance of degassing the lemonade before titration? | The gas influence on the volume of solution (2,5) |
| 4.What are the different steps to calibrate a pH meter? | 1. Plug in the power supply and turn on.
2. Connect the conductivity electrode to the conductivity-meter.
3. Immerse conductivity electrode into beaker of solution of calibration.
4. Click on Sensors on the top of the screen and click Calibrate.
5. After measurement (you read ready on the screen) click enter. (3,5)
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| 5.Discuss the choice of indicators for titration | the choice of indicator for titration involves many factors such as pH range, color change, and compatibility to achieve reliable and precise endpoint determination. (2,5) |
| 6.How do the results of hardness testing before and after boiling the water? | After boiling, the temporary hardness due to bicarbonates can decrease significantly, leading to a reduction in overall hardness by evaporation. However, permanent hardness remains unchanged and will still contribute to the overall hardness of the water (3) |
| 7.How can alkalinity titration help us identify the quality of water? | Alkalinity titration is a valuable method for assessing the quality of water, especially in terms of its buffering capacity and potential to neutralize acids (3) |

The full name: ……………………………………..