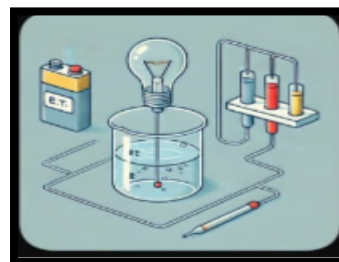


Diagram-Based Questions

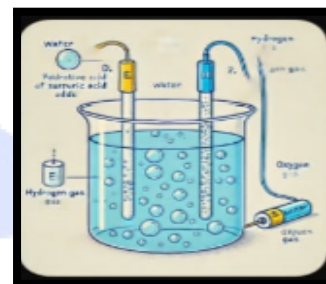
1. Based on the diagram, answer the following:

- What will happen if we use a sugar solution instead of saltwater in the beaker?
- Name two other liquids that would produce a similar result to saltwater.



2. Based on the diagram, answer the following:

- Which gas is collected at the cathode?
- Why is a small amount of sulfuric acid added to water in this process?


Short Answer Questions

- Why does tap water conduct electricity while distilled water does not?
- What is electroplating? Give two examples where electroplating is used in daily life.
- Why is it dangerous to handle electrical appliances with wet hands?
- Explain the process of electrolysis of copper sulfate solution.

Long Answer Questions

- Explain the chemical effects of electric current. Discuss the applications of these effects in daily life.
- Describe an experiment to test the conductivity of three different liquids. Explain your observations and conclusions.
- Why do some liquids conduct electricity while others do not? Explain the role of ions in conductivity and how it relates to substances like acids, bases, and salts.