Exp. 3: Sequence of Chemical Reactions

1. a. What element undergoes chemical changes in this experiment?
   b. Give the color, physical state and symbol of this element before it undergoes any chemical reactions.

2. a. Give the name of the acid used and to dissolve copper in step (1)
   b. What precautions do you need to consider in handling this acid. Explain.

3. Why is litmus paper used in step (2) of the reaction? Explain briefly. \( \text{Cu}^{2+}(aq) \rightarrow \text{Cu(OH)}_2(s) \)

4. What metal is used to recover copper from a solution of copper (II) ion?

5. Write the formula for calculating the percentage recovery for this exp.

6. Why is filtration used in step (3): \( \text{Cu(OH)}_2(s) \rightarrow \text{CuO(s)} \)

7. The color of litmus paper in the presence of a base is _______ and in presence of an acid is._______