

- Write a balanced chemical equation for the process of photosynthesis and the condition of reaction giving physical states of all the states.*
- In the electrolyses of water, name the gas collected at the cathode and anode respectively. Why is the volume of one gas collected at one electrode double than that at the other? How will you test the evolved gas?*
- Two metals X and Y forms the salt XS_4 and YS_4 . The solution of salt XS_4 is blue in colour where as that of YS_4 is colourless. When barium chloride solution is added to XS_4 solution then a white precipitate Z is formed along with the salt which turns the solution green. And when barium chloride solution is added to YS_4 solution, then the same white precipitate Z is formed along with colourless common salt solution*
 - What could be metal X and Y be?*
 - Write the name and formula of salt XS_4 .*
 - Write the name and formula of salt YS_4 .*
 - What is the name and formula white precipitate Z?*
 - Write the name and formula of the salt which does the solution Green in the first case.*
- Zinc replaces hydrogen gas when reacted with dilutes hydrochloric acid whereas copper does not. Explain why?*
- Name the term rancidity. Why is it cause? Suggest some measures to check rancidity .*
- Where is the position of element X and Y in modern*

periodic table whose atomic numbers are 20 and 17.

7. *Calcium is an element with atomic number 20.*
 - (a) *Is it metal or non-metal?*
 - (b) *Will its size be more or smaller than that of potassium*
 - (c) *write the formula of its chloride and oxide.*
8. *An element X belongs to 3rd period and group 16 of the modern periodic table.*
 - (a) *Determine the number of valence electrons and the Valency of X.*
 - (b) *Molecular formula of the compound when X reacts with hydrogen.*
 - (c) *Name the element X and state whether it is metallic or non-metallic.*