

Board – ICSE

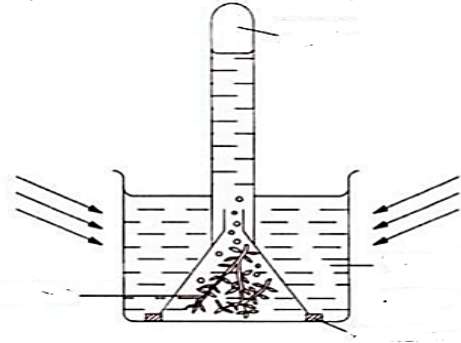
Class – 10

Topic – Photosynthesis

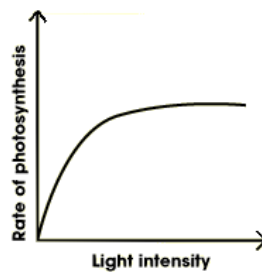
- Complete the following statements by choosing the correct alternative out of those given in brackets.
 - Carbon dioxide is necessary for _____. [Respiration / Photorespiration / Photosynthesis]
 - Animal nutrition is mostly _____. [Autotrophic / Heterotrophic/ Parasitic]
 - Chlorophyll molecule has a _____ in the middle of the ring structure. [Nitrogen, Manganese, Magnesium]
 - Splitting of water results in the release of _____. [Oxygen / Water Oxygen and water]
 - Presence of starch can be tested by _____. [Iodine / Hydrochloric acid / Alcohol]
- Give the overall chemical equation of photosynthesis.
- Give the full form of NADP₄.
- What is photosynthesis?
 - What is the role of light in photosynthesis?
- Describe the structure of chloroplast through a well-labeled diagram.
 - Suggest some habitats or natural circumstances in which
 - Light intensity,
 - Carbon dioxide concentration,
 - Temperature will be limiting factors in photosynthesis.
- Describe the different factors which influence the rate of photosynthesis.
- Two healthy green plants were placed in the dark for 24 hours. They were then set up as shown in figure and left for four hours. Then a leaf was taken from each plant and the chlorophyll was removed from the leaves.
 - How is chlorophyll removed?
 - What would be the next and final step in this experiment?
 - What would be the result of the final step?
 - Which of the two plants would serve as a control?
- What is aim of the given experiment?
 - Label all the parts of this experiment.



(iii) What did you observe from this experiment, explain it?



9. Most leaves have the upper surface more green and shiny. Why?
10. What is the difference between chlorophyll and chloroplast?
11. Describe briefly that how to study the effect of CO_2 on rate of photosynthesis.
12. Following is the graph showing effect of light intensity on rate of photosynthesis. What do you interpret by this graph?



13. Enumerate the steps involved in testing a green leaf for the presence of starch.
14. What is limiting factor, from diagram given in question 6 explain various limiting factor.
15. Give reason of the following statement:

Leaf is treated with ethanol to test starch.

KOH is used in experiment to study effect of CO_2 on photosynthesis.

Chlorophyll is present inside the leaf.

16. Given is the cross-section diagram of leaf.

- a). Label it's all parts.
- b). Name the part where chloroplasts are absent.
- c). What is the function of part E?
- d). What is the significance of part A?

