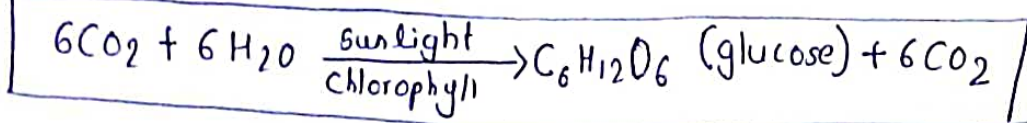


## CHAPTER 1: PROTECTORS OF BIOSPHERE.

Q1) Define Global warming. What is the cause of global warming?  
→ It is a dangerous phenomenon which leads to the rise in earth's temperature. The main reason for global warming is the increase in the level of  $\text{CO}_2$  in atmosphere.

Q2) Explain the process of photosynthesis.  
→ The process of making food by green plants from water & carbon dioxide with the help of sunlight. This process regulates the level of oxygen and  $\text{CO}_2$  in the atmosphere.



Q3) \_\_\_\_\_ imparts green colour to the plant leaf.  
→ chlorophyll.

Q4) What are the parts of chloroplast?  
→ Each chloroplast is double layered cell organelle containing pigments. A fluid called stroma inside the chloroplast & a membrane bound sacs embedded in it, are the grana.

Q5) Name the pigments present in chloroplast?  
→ Chlorophyll a, chlorophyll b, carotene & xanthophyll.

Q6) Define Light reaction & ~~Light~~ Dark reaction.

→ Light Reaction: Here, light energy is converted into chemical energy (stored in ATP molecules) & with help of this energy, water molecules are broken down into hydrogen and oxygen.  
• This reaction occurs inside the grana of chloroplast.  $\text{O}_2$  is released during this phase.

Dark reaction: → This phase is also called as Calvin cycle.

- Using the energy of ATP, Hydrogen combines with  $\text{CO}_2$ , to form glucose.
- This phase occurs in the stroma of chloroplast, as it does not require light.

97) \_\_\_\_\_ are called as 'energy currencies of the cells'.

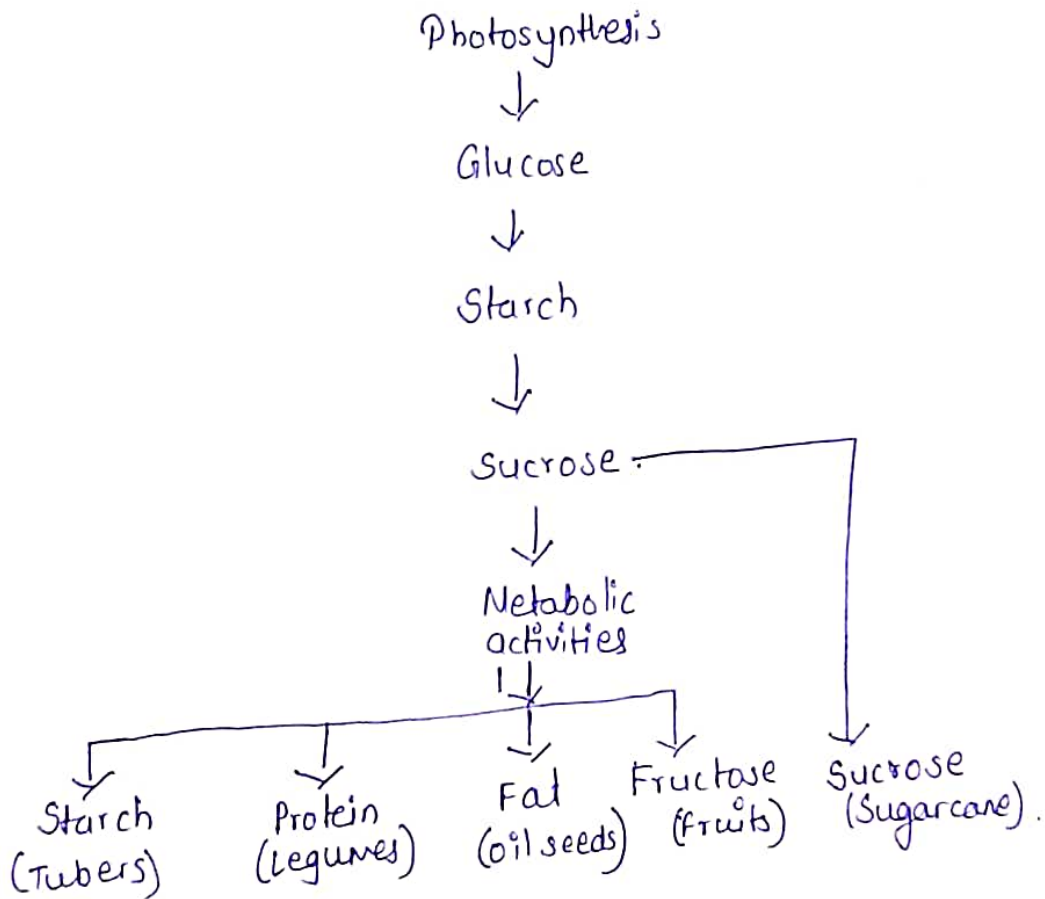
→ ATP molecules.

98) Why is glucose converted to starch during photosynthesis. Give the chemical changes to glucose to store in diff. forms.

→ Since glucose is easily soluble in water it cannot be stored in plant body. Therefore, plants store glucose in the form of insoluble starch in leaves.

• Plants utilise starch as a source of energy for life activities & to prepare substances required for growth.

• Starch is later converted to sucrose & is transported through phloem to various plant parts & stored there in diff. forms.



99) Define chemosynthesis.

→ All producers on earth do not depend on sunlight. The sulphur bacteria seen on the land & water are examples of this. They produce energy by breaking down chemical compounds. This process is called chemosynthesis.

10) 70-80% of oxygen in atmosphere is contributed by \_\_\_\_\_ & \_\_\_\_\_.

→ Algae & Phytoplanktons.

Q11) What are Phytoplanktons?

→ Phytoplanktons are the free floating microscopic organisms that perform photosynthesis in oceans.

Q12) Give examples illustrating how plants help in the time of natural disasters.

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- Mangroove forest help in controlling tsunami to some extent.
  - Bamboo forests, reed, Lemongrass protect the river banks from collapsing during flood.
  - Trees & bushes in mountains & hills prevent soil erosion & landslide.