

## Points to Remember

- Magnesium metal ion is a constituent of chlorophyll.
- Chlorophyll a. pigment acts directly to convert light energy to chemical energy.
- 400 – 700nm range of wave length is called photosynthetically active radiation (PAR).
- Green light range is least effective in photosynthesis.
- Chemosynthetic bacteria obtain energy from inorganic chemicals.
- Energy required for ATP synthesis in PSII comes from proton gradient.
- During light reaction in photosynthesis ATP, hydrogen and O<sub>2</sub> are formed.
- Dark reaction in photosynthesis is called so because it does not depend on light energy
- Phosphoenolpyruvate (PEP) is primary CO<sub>2</sub> acceptor in C<sub>4</sub> plants.
- Ribulose 1,5-bisphosphate (RuBP) is the primary CO<sub>2</sub> acceptor of C<sub>3</sub> plants.
- Splitting of water is associated with Inner surface of thylakoid membrane
- The correct sequence of flow of electrons in the light reaction is PSII, plastoquinone, cytochromes, PSI, ferredoxin.
- The reaction that is responsible for the primary fixation of CO<sub>2</sub> is catalysed by RuBP carboxylase
- When CO<sub>2</sub> is added to PEP, the first stable product synthesised is Oxaloacetate.
- Cyanobacteria and some other photosynthetic bacteria only have light harvesting pigments, they can trap solar energy and perform photosynthesis.
- the first stable product of CO<sub>2</sub> fixation in sorghum is oxaloacetic acid.
- photosystem-I -> Cyclic photophosphorylation and non- Cyclic photophosphorylation.
- photosystem-II -> only in non- Cyclic photophosphorylation.
- In light reaction, plastoquinone facilitates the transfer of electron from PS-II to Cytb<sub>6</sub>f complex.
- the oxygenation activity of RuBisCo enzyme in photorespiration leads to the formation of 1 molecule of the 3-C compound.
- During non-cyclic photophosphorylation, when electrons are lost from the reaction centre at PS II, water is the source which replaces these electrons.
- In Hatch and Slack pathway, the primary CO<sub>2</sub> acceptor is Phospheno pyruvate.
- Oxygen is not produced during photosynthesis by green sulphur bacteria.
- Emerson's enhancement effect and red drop have been instrumental in the discovery of two photosystems operating simultaneously.
- In a chloroplast the highest number of protons are found in lumen of thylakoids.
- The process which makes major difference between C<sub>3</sub> and C<sub>4</sub> plant is photorespiration.
- The structures that are formed by stacking of organised flattened membranous sack in the chloroplasts are grana