

Biology - FSC Part 1 Biology English Medium Chapter 11 Preparation

Q1. How NADH & ATP inhibit cellular respiration?

Ans 1: Glucokinase enzyme activity is inhibited by high concentration ATP and NADH due to which process of glycolysis is blocked and cellular respiration is inhibited not.

Q2. Define accessory pigments and its role in transferring of energy,

Ans 1: Carotenoids and chlorophyll are accessory pigments because they absorb light and transfer the energy to chlorophyll a which then initiated the light reactions.

Q3. What are similarities between the chlorophyll and haemoglobin?

Ans 1:

1. Heme portion of hemoglobin is also porphyrin ring which is similar to porphyrin ring of chlorophyll but heme contains an iron atom instead of magnesium atom in the center

Q4. Define photolysis and photophosphorylation.

Ans 1: Photolysis : The water splitting step photosynthesis that release oxygen is called photolysis.

Ans 2: Photophosphorylation: As electron moves down the electron transport chain their energy goes on decreasing and is used by thylakoid membrane to produce ATP.

Q5. Define Krebs cycle.

Ans 1: It is a series of reactions, which was discovered by Hans Krebs, so it is called Krebs cycle. In it acetyl Co-A is oxidized by a series of reactions and energy is released step wise.

Q6. What is fermentation? Name its two types.

Ans 1: Fermentation is a process in which pyruvic acid is oxidized in the absence of oxygen. Its types are alcoholic fermentation and lactic acid fermentation.

Q7. Define glycolysis. Where does it take place?

Ans 1: Glycolysis means breakdown of sugar. This is the first step of respiration and it takes place in the cytoplasm.

Q8. Define redox process. Give example

Ans 1: Oxidation reduction reaction collectively called redox reaction or redox process, Removal of hydrogen is called oxidation and addition of hydrogen is called reduction.

Q9. What is cyclic phosphorylation? Give cause of its occurrence.

Ans 1: In cyclic ETC electron cycle back from primary electron acceptor to ferredoxin to the cytochrome complex and from there continue on the P₇₀₀ chlorophyll.

Cause Cyclic electron flow takes place when the chloroplasts runs low on ATP for calvin cycle, the cycle slows down and NADPH accumulates in the chloroplast.

Q10. What are cytochromes? Give its role.

Ans 1: Synthesis of ATP in the presence of oxygen is called oxidative phosphorylation.
