Biology - FSC Part 1 Biology English Medium Chapter 11 Preparation

Q1. 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.

Q2. What are products of light reaction of photosynthesis.

Ans 1: $NADPH_2$ and ATP are products of light reaction.

Q3. What are photosystems?

Ans 1: Photosynthetic pigments are organized into clusters,called photosystems ,for efficient absorption and utilization of solar energy in the thylakoid membranes.

Q4. Differentiate between respiration and photosynthesis.

Ans 1: Respiration : It is an energy releasing process.
It is raw material in glucose and oxygen.
It occurs day and night

Ans 2: It is an energy capturing process.
Its raw material is CO_2 and water.
It occurs only day time.

Q5. What is the function of Mg in chlorophyll molecule?

Ans 1: An atom of magnesium is present in the center of porphyrin ring and is coordinated with the nitrogen of each porphyrin ring.

Q6. Define glycolysis.Where it takes place?

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

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Q7. Give function of NADP reductase?

Ans 1: An enzyme called NADP reductase that transfer the electrons from Fd to NADP.This is the redox reaction that stores the high energy electrons in NADPH,The NADPH will provide reducing power for the synthesis of sugar in Calvin cycle.

Q8. Define biogeneratics.Does it obey laws of thermodynamics?

Ans 1: Bioenergetics is the quantitative study of energy relationships and energy conversion in biological system.Yes biological energy transformation obeys the laws of thermodynamics.

Q9. Define photosynthesis.

Ans 1: The process in which energy poor inorganic oxidized compounds of carbons and hydrogen are reduces to energy-rich carbohydrate using the light energy that is absorbed and converted into chemical energy by chlorophyll and some other photosynthetic pigments.

Q10. What is rubisco?State its function.

Ans 1: The Calvin cycle starts when CO_2 molecule reacts with highly reactive phosphorylated 5- carbon sugar molecule called ribulose biphosphate.This reaction is catalyzed by the enzyme called ribulose bisphosphate carboxylase also called Rubisco.