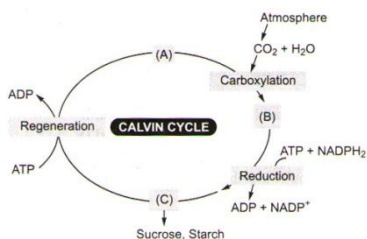


Class : XIth
Date :

Subject : BIOLOGY
DPP No. :

Topic :- Photosynthesis in Higher Plants

- In an experiment, chloroplasts were made acidic by soaking them in acidic solution. What will happen if this chloroplast is transferred to a solution having basic pH?
 - ATP formation takes place
 - No ATP formation takes place
 - NAD formation takes place
 - Sugar formation takes place
- Choose the correct combination of labeling the carbohydrate molecule involved in the Calvin cycle.



- A-RuBP, B-Triose phosphate, C-PGA
 - A-PGA, B-RuBP, C-Triose phosphate
 - A-PGA, B-Triose phosphate, C-RuBP
 - A-RuBP, B-PGA, C-Triose phosphate
- If the light becomes unavailable during photosynthesis then
 - Immediately biosynthetic process stops
 - Biosynthetic phase does not stop
 - Biosynthetic phase stops forever
 - Biosynthetic phase continues for some time and then stops
 - I. In photosynthesis, the proton accumulation is towards the inside of membrane of thylakoid
II. In respiration, proton accumulation occurs in the inter membrane space of the mitochondria
Select the correct option
 - Statement I is incorrect II is correct
 - Statement II is incorrect I is correct
 - Both Statement I and Statement II incorrect
 - Both Statement I and Statement II are correct
 - Chloroplasts without grana are known to occur in
 - Bundle-sheath cells of C_3 -plants
 - Mesophyll cells of C_4 -plants
 - Bundle-sheath cells of C_4 -plants
 - Mesophyll cells of all plants

6. PGA, the first carbon dioxide fixation product was firstly discovered in
 a) Bryophytes b) Pteridophytes c) Angiosperms d) Alga
7. Liberation of oxygen when green cells in water are exposed to sunlight in presence of suitable acceptor is called
 a) Arnon's reaction b) Emerson's enhance effect
 c) Blackman's reaction d) Hill's reaction
8. Fixation of one molecule of CO₂ requires how much (in C₄-plants). ATP and NADPH respectively
 a) 5/2 b) 2/5 c) 2/3 d) 3/2
9. In half leaf experiment, a part of a leaf is enclosed in a test tube containing KOH soaked cotton, while the other half is exposed to air and then setup is placed in light for sometime. It was latter found that part of leaf which was exposed to air tested positive for starch. This indicates that
 a) Light is essential for photosynthesis
 b) Oxygen is liberated in photosynthesis
 c) Water is essential for photosynthesis because in KOH soaked leaf, starch synthesis do not occurs as water reacts with KOH and it become unavailable for photosynthesis
 Carbon dioxide is essential for photosynthesis because in KOH soaked leaf, starch synthesis do not
 d) occurs as CO₂ is absorbed by, so CO₂ is not available for photosynthesis
10. Is a CAM plant.
 a) Maize b) Pineapple c) Onion d) Pea
11. Every CO₂ molecule entering the Calvin cycle needs
 a) 2 molecule of NADPH and 3 molecule of ATP for its fixation
 b) 2 molecule of NADPH and 2 molecule of ATP for its fixation
 c) Variable amount of ATP
 d) Only NADPH
12. Proton gradient is very important across the membrane because
 a) Building up of proton gradient release energy
 b) Building up of proton gradient increase the pH towards lumen side of thylakoid membrane
 c) Breakdown of proton gradient release CO₂
 d) Breakdown of proton gradient release energy
13. The first acceptor of electrons from an excited chlorophyll molecule of Photo system-II is
 a) Cytochrome b) Iron-sulphur protein
 c) Ferredoxin d) Quinine
14. Substance which is essential for the respiration as well as photosynthesis is
 a) Cytochrome b) RuBisCo c) Plastocyanin d) Ubiquinine

15. Which of the following is a 4-carbon compound?
- a) Oxaloacetic acid b) Phosphoglyceric acid
c) Ribulose biphosphate d) Phosphoenol pyruvate
16. A graph that plots the rate at which CO_2 is converted to glucose *versus* the wavelength of light illuminating a leaf is called
- a) An absorption spectrum b) An adsorption spectrum
c) Pigment kinetics d) An action spectrum
17. Water stress makes plant leaves ...A... thus, ...B... the surface area of leaves and their metabolic activity as well
Here A and B refer to
- a) A-wilt, B-increases b) A-wilt, B-decreases c) A-fall, B-decreases d) A-fall, B-increases
18. Which plant performs photosynthesis even after the closing of stomata?
- a) C_2 b) C_3 c) C_4 d) C_5
19. During photorespiration, the conversion of phosphoglycolate to glycolate takes place in this cell organelle.
- a) Mitochondria b) Glyoxysome c) Peroxisome d) Chloroplast
20. The chemical formula of starch is
- a) $(\text{C}_6\text{H}_{10}\text{O}_5)_n$ b) $(\text{C}_6\text{H}_{12}\text{O}_6)_n$ c) $\text{C}_{12}\text{H}_{22}\text{O}_{11}$ d) CH_3COOH

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