



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

WORK SHEET – 35

Class: IX

Sub: LIFE SCIENCE

Date: 12.07.2021



Topic: Ch 3 (part 4) PHOTOSYNTHESIS – C-4 And CAM CYCLE

F.M. : 15

Choose the correct option:

(1x15=15)

- C-4 cycle operates in plants like -
 - Sugarcane
 - Maize
 - Panicum*
 - All of these
- Important anatomical feature of C-4 plants are :-
 - Kranz anatomy
 - Two types of chloroplasts
 - Thick Cuticle
 - Both (a) and (b)
- The first stable product of C-4 cycle is :-
 - Malic acid
 - Oxaloacetic acid
 - Pyruvic acid
 - None of these
- The primary acceptor of CO₂ in C-4 plants is :-
 - RuBP
 - Malic acid
 - Phospho-enol-pyruvic acid
 - Pyruvic acid
- The enzyme which brings about fixation of CO₂ in C-4 plants is :-
 - Phospho pyruvate kinase
 - Rubisco
 - Phosphoenol pyruvate carboxylase
 - None of these
- OAA undergoes the process of _____ to produce malic acid and CO₂.
 - Oxidation
 - Decarboxylation
 - Carboxylation
 - Reduction
- The secondary fixation of CO₂ in C-4 cycle is brought about by the enzyme :-
 - RuBP carboxylase
 - RuBP oxygenase
 - PEP carboxylase
 - All of these
- The important characteristics of plants undergoing CAM are :-
 - Xerophytic plants
 - Stomata opens at night
 - Belong to the family crassulaceae
 - All of these
- The fixation of CO₂ by RuBP in C-4 plants takes place during :-
 - night
 - day
 - mid night
 - all day and night
- C-1 cycle operates in :-
 - Wheat
 - Sugarcane
 - Methanogenic bacteria
 - Mint
- The site for primary fixation of CO₂ in C-4 plants is :-
 - Chloroplasts
 - Bundle sheath chloroplasts
 - Mesophyll cell chloroplasts
 - None of these
- C-4 cycle is also known as :-
 - Hatch and slack pathway
 - Calvin cycle
 - Photorespiration
 - Photo oxidation

13. Malic acid on decarboxylation produces CO_2 and ----- which is transported to mesophyll cells:
- a) Oxaloacetic acid
 - b) Pyruvic acid
 - c) Phospho-enol pyruvate
 - d) RuBP
14. Which type of plants are photosynthetically more productive than C-3 plants ?
- a) CAM plants
 - b) C-4 plants
 - c) C-1 organisms
 - d) All of these
15. The steps of C-4 includes :-
- a) Primary fixation of CO_2
 - b) Transport of C-4 acid
 - c) Secondary fixation of CO_2
 - d) All of these

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