



ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

WORK SHEET – 25

Class: IX

Sub: PHOTOSYNTHESIS

Date: 12.05.2020

Topic: PHOTOSYNTHESIS – C-4 And CAM CYCLE

F.M. : 15

Choose the correct option:

(1x15=15)

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

Shaista Ahmed