



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

SOLUTION 35

Class: IX

Sub: LIFE SCIENCE

Date: 12.07.2021



Topic: Ch 3(part 4) PHOTOSYNTHESIS – C4 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
Answer :All of these (d)
- Important anatomical feature of C-4 plants are :-
a) Kranz anatomy b) Two types of chloroplasts c) Thick Cuticle d) Both (a) and (b)
Answer :Both (a) and (b) (d)
- The first stable product of C-4 cycle is :-
a) Malic acid b) Oxaloacetic acid c) Pyruvic acid d) None of these
Answer :Oxaloacetic acid (b)
- The primary acceptor of CO₂ in C-4 plants is :-
a) RuBP b) Malic acid c) Phospho-enol-pyruvic acid d) Pyruvic acid
Answer :Phospho-enol-pyruvic acid (c)
- The enzyme which brings about fixation of CO₂ in C-4 plants is :-
a) Phospho pyruvate kinase b) Rubisco c) Phospho-enol pyruvate carboxylase
b) None of these
c) **Answer :Phospho-enol-pyruvate carboxylase (c)**
- OAA undergoes the process of _____ to produce malic acid and CO₂.
a) Oxidation b) Decarboxylation c) Carboxylation d) Reduction
Answer :Decarboxylation (b)
- 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
Answer :RuBP carboxylase (a)
- The important characteristics of plants undergoing CAM are :-
a) Xerophytic plants b) Stomata open at night c) Belong to the family crassulaceae
d) All of these
Answer :All of these (d)

9. 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
b) Answer :day (b)
10. C-1 cycle operates in :-
a) Wheat b) Sugarcane c) Methanogenic bacteria d) Mint
b) Answer :Methanogenic bacteria (c)
11. 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
Answer :Mesophyll cell chloroplasts (c)
12. C-4 cycle is also known as :-
a) Hatch and slack pathway b) Calvin cycle c) Photorespiration d) Photo oxidation
Answer :Hatch and Slack pathway (a)
13. Malic acid on decarboxylation produces CO₂ and ----- which is transported to mesophyll cells:
a) Oxaloacetic acid b) Pyruvic acid c) Phospho-enol pyruvate d) RuBP
Answer :Pyruvic acid (b)
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
Answer :C-4 plants (b)
15. The steps of C-4 includes :-
a) Primary fixation of CO₂ b) Transport of C-4 acid c) Secondary fixation of CO₂
d) All of these
Answer :All of these (d)

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