

Subject: Biology Question Paper Total Marks: 20
Class: XI 12: Photosynthesis Time: 1 Hour

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SECTION A

- Q.1 : Choose the correct option :
 - i) A cell that lacks chloroplast does not\
 - a) evolve carbon dioxide
 - b) liberate oxygen
 - c) require water
 - d) utilize carbohydrates
 - ii) How many Calvin cycles are required to produce one molecule of glucose?
 - a) 3
- b) 4
- c) 5
- d) 6
- iii) CAM plants are mostly
 - a) Tropical plants
- b) Succulents
- c) Monocots
- d) Mangroves
- iv) In maize and wheat, the first stable products formed in bundle sheath cells respectively are
 - a) OAA and PEPA
 - b) OAA and OAA
 - c) OAA and 3PGA.
 - d) 3PGA and OAA
- Q.2 : Answer the following:
 - i) What is excited state?
 - ii) Define Quantum energy.

SECTION B

- : Answer the following: (ANY 3)
- Q.3 : Explain why photosynthesis is considered the most important process in the biosphere.
- Q.4: Distinguish between action spectrum and absorption spectrum.
- Q.5 : Explain Hill reaction.

- **Q.6**: What is functional significance of Kranz anatomy?
- Q.7 : Draw a neat labelled diagram of CAM pathway.

SECTION C

- : Answer the following: (ANY 3) 9
- **Q.8**: State and explain the Blackman's law of limiting factor.
- Q.9 : Differentiate between C3 and C4 plant.
- **Q.10:** Diagrammatically explain the process of photorespiration.
- **Q.11:** Describe diagrammatically Cyclic photo phosphorylation.
- **Q.12:** What are the two types of photosystems?

SECTION D

- ; nswer the following: (ANY 1)
- Q.13: Describe Diagrammatically Non-cyclic photosphorylation.
- Q.14: Describe Calvin's cycle.

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