

SUCCESS KEY TEST SERIES

Work Sheet

Std: 11th Science

Subject: Biology

Time: 1Hrs

Date :

12. Photosynthesis

Max Marks: 35

Q.1 Select and write the most appropriate answers from given alternatives for each subquestion: 5

- 1) Photorespiration begins when enzyme _____ acts as oxygenase at high concentration of O_2 .
(a) Ribulose (b) Rubisco (c) Malate (d) Pyruvate phosphate
- 2) In presence of high concentration of oxygen, RuBP carboxylase converts RuBP carboxylase converts RuBP to
(a) Malic acid and PEP (b) PGA and PEP
(c) PGA and malic acid (d) PGA and phosphoglycolate
- 3) C_4 pathway is also called as dicarboxylation pathway because
(a) RuBP + CO_2 in bundle sheath cells
(b) PEPA + CO_2 in mesophyll cells
(c) both (a) and (b)
(d) It occurs in presence of intensive light
- 4) 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
- 5) In most of the plants, photosynthesis is maximum in bright diffused sunlight, decreases in strong light and _____ in very low intensity light.
(a) Slows down (b) Speeds up (c) Stop (d) Restart

Q.2 Answer the following in one sentences: 5

- 1) Why is rate of photosynthesis always proportional to quantity of chlorophyll present?
- 2) What are the external factors which affect photosynthesis?
- 3) Name the 3 pigments located in the thylakoid membrane?
- 4) How do light energy travel?
- 5) What is termed as absorption spectrum?

Q.3 Answer the following: 10

- 1) Explain the structure of a chlorophyll molecule.
- 2) What would have happened if plants did not have accessory pigments?
- 3) Distinguish between Photosystem I and Photosystem II.
- 4) Justify : All life on earth 'bottled solar energy'.
- 5) Which are the two reactions involved in the process of photosynthesis?

Q.4 Answer the following: 15

- 1) Distinguish between:
cyclic photophosphorylation and non-cyclic photophosphorylation
- 2) Mention the internal factors which affects photosynthesis.
- 3) What is functional significance of Kranz anatomy?
- 4) State and explain the Blackman's law of limiting factor.
- 5) Why is photolysis of water accompanied with non-cyclic photophosphorylation?

----- All the Best -----