

Model Question Paper
Botany-Plant physiology - Part I
12th Standard

Biology

Reg.No. :

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I. Answer all the questions.

II. Use blue pen only.

III. Question number 17 is compulsory.

Time : 01:30:00 Hrs

Total Marks : 65

5 x 1 = 5

Part-A

- 1) Photosynthesis takes place in
(a) mitochondria (b) peroxisomes (c) chloroplasts (d) ribosomes
- 2) During cyclic electron transport, which one of the following is produced
(a) NADPH₂ only (b) ATP only (c) NADH₂ only (d) both ATP and NADPH₂
- 3) Which one of the following is a five carbon compound?
(a) fructose (b) erythrose (c) ribose (d) DHAP
- 4) Which one of the following is a C₄ plant?
(a) rice (b) wheat (c) sugarcane (d) potato
- 5) The essential component for the formation of chlorophyll
(a) Mg (b) Fe (c) Cl (d) Mn

Part-B

5 x 3 = 15

- 6) What are the generally called accessory pigments?
- 7) What is photolysis of water?
- 8) Define light reaction.
- 9) Define dark reaction.
- 10) State the conditions under which cyclic photophosphorylation occurs.

Part-C

5 x 5 = 25

- 11) Write short notes on site of photosynthesis (or) Write about structure of chloroplast.
- 12) Write short notes on photosynthetic electron transport system
- 13) What are the differences between C₃ and C₄ photosynthetic pathway?
- 14) Explain the test tube and funnel experiment to demonstrate that oxygen is evolved during photosynthesis.
- 15) Write short notes on Ganong's light screen experiment.

Part-D

2 x 10 = 20

- 16) Describe the light reaction of photosynthesis (or) Explain cyclic and noncyclic photophosphorylation
- 17) a) Write an account on dark reactions of photosynthesis.

(OR)

- b) Write an essay on C₄ pathway.
