Exam Date & Time: 29-Sep-2020 (10:00 AM - 01:45 PM)

PSG COLLEGE OF ARTS AND SCIENCE

Note: Writing 3hrs: Checking & Inserting Image : 30mins

BSc DEGREE EXAMINATION MAY 2020
(Sixth Semester)

Branch - BOTANY

PLANT METABOLISM [14BOU23]

Marks: 75 **Duration: 210 mins.**

SECTION A

Answer all the questions.

1) Define free energy. (2)

2) What is enzyme inhibition? (2)

3) What is red drop? (2)

4) What is action spectrum? (2)

5) What is photolysis of water? (2)

6) What is Kranz anatomy? (2)

7) Mention the factors affecting respiration. (2)

8) Define Respiratory quotient. (2)

9) Define Transmission. (2)

10) What is leghamoglobin? (2)

SECTION B

Answer all the questions.

11) State and explain the laws of thermodynamics. (5)

a)

[OR] Write a brief note on allosteric inhibition of enzymes. (5)

b)

12) Describe the electromagnetic nature of light. (5)

a)

[OR] Comment on Emerson's enhancement effect. (5)

b)

13) Illustrate the Hatch and Slack pathway. (5)

a)

[OR] Explain the process of cyclic photophosphorylation. (5)

b)

14) Describe the structure of ATP and add a note on its significance. (5)

a)

[OR] Explain about the electron transport system and oxidative phosphorylation. (5)

b)

15) **Describe the β oxidation of fatty acids.** (5)

a)

[OR] Explain the formation of root nodules in leguminous plants. (5)

b)

SECTION C

Answer 3 out of 5 questions.

16) Enumerate the factors affecting the enzyme action. (10)

17) Give an elaborate note on the photosynthetic pigments and the absorption of light energy by them. (10)

18) Explain the Calvin's cycle with a neat sketch. (10)

19) Write an essay on Glycolytic pathway. (10)

20) Explain the biochemistry of nitrogen fixation. (10)

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