QP CODE: 22100058

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Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, JANUARY 2022

Fifth Semester

CORE COURSE - BO5CRT07 - PLANT PHYSIOLOGY & BIOCHEMISTRY

Common to B.Sc Botany Model I, B.Sc Botany Model II Environmental Monitoring And Management, B.Sc Botany Model II Food Microbiology, B.Sc Botany Model II Horticulture and Nursery Management, B.Sc Botany Model II Plant Biotechnology & B.Sc Botany and Biotechnology Model III Double Main

2017 Admission Onwards

B9213A43

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. Differentiate between symplastic and apoplastic movement of water molecules in plants.
2. Write any two symptoms of Magnesium deficiency in plants.
3. What are the products of non-cyclic electron transport?
4. Define Blackman's Law of limiting factors.
5. What do you mean by pholem loading?
6. Distinguish between aerobic and anaerobic respiration.
7. Give the name of end product of glycolysis.
8. Define phototropism.
9. What is Bronsted -Lowry concept of acids and bases?
10. What do you mean by Oligosaccharide?
11. Draw the fundamental chemical representation/structure of an amino acid.
12. Write down Michaelis-Menton equation for Enzyme kinetics.

(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Distinguish between diffusion and osmosis.
14. Write notes on photosynthetic pigments and their roles in photosynthesis.
15. Distinguish between C3 and C2 cycle of Carbon fixation in plants.
16. Explain oxidative decarboxylation in respiration.
17. Write down the physiological effects and commercial applications of Abscisic acid(ABA)
18. How do plants adapt to temperature stress?
19. Explain various types of bonding/linkages of amino acids.
20. Briefly explain simple lipids.
21. Explain the classification of enzymes.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Describe the various steps in stomatal transpiration and explain the detailed mechanism of stomatal movement in plants.
23. Explain Crassulacean Acid Metabolism with merits and demerits.
24. Explain the terminal oxidation of reduced coenzymes through electron transport chain in mitochondrial membrane.
25. Explain various kinds of enzyme inhibition.

(2×10=20)