



**QP CODE: 20100058**

**Reg No** : .....

**Name** : .....

**BSc DEGREE (CBCS ) EXAMINATION, FEBRUARY 2020**

**Fifth Semester**

**Core Course - BO5CRT07 - PLANT PHYSIOLOGY & BIOCHEMISTRY**

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

3872FE67

Time: 3 Hours

Maximum Marks :60

**Part A**

*Answer any **ten** questions.*

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

1. What are Guard cells?
2. Name the site of Photosynthesis in plants.
3. What do you mean by Phloem loading?
4. What are Long-day plants? Give examples.
5. What are Allelochemicals? Give examples.
6. Write any two chemical properties of Water.
7. What is Arrhenius concept of acids and bases?
8. What is buffer action?
9. What do you mean by Oligosaccharide?
10. What is alpha helix?
11. What is a phospholipid?
12. Write down Michaelis-Menton equation for Enzyme kinetics.

(10×1=10)





### Part B

*Answer any **six** questions.*

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

13. Briefly explain the ascent of sap in Xylem.
14. Differentiate between Macro and micronutrients in plant Growth.
15. List out the features, advantages and disadvantages of C<sub>2</sub> cycle.
16. Explain the physiological role of ABA in plant life.
17. Explain the classification of Carbohydrates with examples.
18. Explain the structure of Glucose and Fructose with ring and open chain structure.
19. What is Starch ? Explain the composition.
20. Explain induced fit theory and Lock and Key hypothesis with diagram.
21. Explain Competitive, uncompetitive and non-competitive enzyme inhibitions.

(6×5=30)

### Part C

*Answer any **two** questions.*

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

22. Explain Embden-Meyerhoff-Parnas pathway.
23. Diagrammatically explain a) EMP Pathway b) Citric acid cycle.
24. Explain the following: a) Peptide bond b) alpha helix c) Beta pleated structures d). Tertiary structure e) Quaternary structure.
25. Explain various functions and factors affecting enzyme activity.

(2×10=20)

