BSc DEGREE (CBCS) EXAMINATION, OCTOBER 2019

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

39594834

Maximum Marks: 60   Time: 3 Hours

Part A

*Answer any **ten** questions.*

Each question carries 1 mark.

1. Define Osmotic potential

2. Distinguish between Essential and Non-essential elements

3. Which is the metal ion present in the Chlorophyll molecule?

4. What do you mean by Phloem loading?

5. Name the five major groups of growth hormones in plants

6. What is Seismonasty?

7. What is Bronsted -Lowry concept of acids and bases?

8. Draw the ring structure of Glucose

9. What is a Polysaccharide?

10. What is a peptide bond?

11. What is Lock and Key hypothesis of enzyme action?

12. What is competitive enzyme inhibition?

(10×1=10)

Part B

Answer any six questions.

Each question carries 5 marks.

13. Discuss the factors affecting transpiration

14. Explain Red drop and Emmerson enhancement effect

15. List out the major difference between aerobic and anaerobic respiration

16. Write a note on the adaptations of Plants against water and temperature stress

17. What is a buffer? Explain buffer action

18. Distinguish between Reducing and non-reducing sugars

19. Draw the ring structure of Sucrose? What do you mean by Inversion in Sucrose?

20. Explain general features and roles of Lipids

21. Explain the classification and Nomenclature of Enzymes

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Explain Kreb's Cycle with schematic representation

23. Explain the following a)Molecular structure of Water with diagram b) chemical and physical properties of water

24. Explain the following a) Lock and Key hypothesis b) Induced fit theory c) Competitive inhibition d) non-competitive inhibition

25. Derive an expression for Michaelis -Menton equation in enzyme kinetics

(2×10=20)