

2025

M.Sc. 3rd Semester Examination

**BOTANY**

Paper : BOT - 306

(Biochemistry and Molecular Biology)

(New Syllabus)

Full Marks : 25

Time : Two Hours

*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

**Group - A**

Answer any *two* questions :  $2 \times 2 = 4$

1. Explain optical isomerism citing one example.
2. What is Zwitter ion?
3. Write down the source and functions of Morphine and Quinine.
4. Differentiate between determinate and indeterminate root nodule.

**Group - B**

Write short notes on (any *two*) :  $4 \times 2 = 8$

5. Process of nodulation in symbiotic nitrogen fixation
6. Plant phenolics

P.T.O.

( 2 )

7. Double reciprocal plot
8. Conjugated proteins

**Group - C**

Answer any *one* question :  $8 \times 1 = 8$

9. Briefly discuss about the monosaccharide derivatives of biological importance. Write a note on degradation process of starch mentioning the enzymes involved. 5+3
10. Briefly describe about the inventory of ROS in plants. Discuss in detail the dual role of ROS in plants.

**Internal Assessment : 5 marks**

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