

**Exam. Code : 210001**  
**Subject Code : 4895**

**M.Sc. Botany 1<sup>st</sup> Semester (Batch 2021-23)**

**PLANT PHYSIOLOGY**

**Paper : BOT-C514**

**Time Allowed—3 Hours** [Maximum Marks—50]

**Note :—Attempt FIVE questions in all, selecting at least ONE question from each section. The fifth question may be attempted from any section. All questions carry equal marks.**

**SECTION-A**

1. Write short notes on :
  - (i) Water potential and its components
  - (ii) Raolt's law
2. Define biological energy currency and describe its group transfer potential.
3. What are biological receptors ? Describe G-protein receptor in detail.
4. Explain the mechanism of two component sensor-regulator system in bacteria.

**SECTION-C**

5. Describe briefly :
  - (i) Carbon metabolism
  - (ii) Assimilation and uptake of nitrate

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(Contd.)

6. Explain the mechanism of symbiotic nitrogen fixation in plants.

**SECTION-D**

7. Write short notes on :
  - (i) Uptake and transport of sulphur in plants
  - (ii) Sulphate assimilation
8. Describe the synthesis and function of glutathione in plants.

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