

**(DBOT 04)**

M.Sc. DEGREE EXAMINATION, MAY 2011.

First Year

Botany

Paper IV — PLANT PHYSIOLOGY AND  
METABOLISM

Time : Three hours

Maximum : 100 marks

SECTION A — (5 × 8 = 40 marks)

Answer any FIVE of the following.

1. Osmosis
2. The cohesion theory.
3. Nomenclature of enzymes.
4. Mechanisms of electron and proton transport.
5. Soil nitrogen sources.
6. Glycolipids.
7. Photoperiodism.
8. Photochemical properties of phytochrome.

SECTION B — (4 × 15 = 60 marks)

Answer All the FOUR questions.

9. (a) Write an essay on translocation of water.

Or

- (b) Give an account on membrane transport proteins.

10. (a) Write an essay on  $C_3$  and  $C_4$  cycle.

Or

- (b) Give an account on Glycolysis.

11. (a) Describe the synthesis of amino acids by reductive amination and transamination.

Or

- (b) Give an account on biosynthesis of amino acids.

12. (a) Write an essay on plant growth regulators.

Or

- (b) Describe the HR and SAR process.