

(DBOT 04)

M.Sc. (BOTANY) (Previous) DEGREE EXAMINATION :: MAY 2006**Paper - IV : PLANT PHYSIOLOGY AND METABOLISM**

Time: Three hours

Maximum : 100 Marks

Answer any FIVE questions from Section - A**Each question carries 8 marks****Also answer ALL the question from Section - B****Each question carries 15 marks****SECTION - A****(5 X 8 = 40 marks)**

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|-------------------------------|------------------------|
| 1. Aquaporin | 2. Active transport |
| 3. Light harvesting complexes | 4. Glycolysis |
| 5. Transamination | 6. Membrane lipids |
| 7. Phytochrome | 8. Heat shock proteins |

SECTION - B**(4 X 15 = 60 marks)**

9. (a) Explain the concept of water potential and major factors contributing to water potential.
Or
(b) Discuss the role of macronutrients in plant metabolism.
10. (a) Explain the mechanism of electron and proton transport in the thylakoid membrane.
Or
(b) Describe C₄ photosynthetic carbon assimilation and comment on Ecophysiological considerations.
11. (a) Explain the mechanism of protein synthesis.
Or
(b) Give an account on biosynthesis of fatty acids.
12. (a) Explain photoperiodism and role of vernalisation.
Or
(b) Explain hormonal regulation of gene expression add a note on signal transduction.

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