

(DBOT 04)

M.Sc. (Previous) DEGREE EXAMINATION,
DECEMBER 2010.

First Year

Botany

Paper IV — PLANT PHYSIOLOGY AND
METABOLISM

Time : Three hours

Maximum : 100 marks

SECTION A — ($5 \times 8 = 40$ marks)

Answer any FIVE questions.

Each question carries 8 marks.

1. SPAC concept.
2. Membrane transport Proteins.
3. Photo systems.
4. Components of electron transport.
5. GS-GOGAT.
6. α -Oxidation.
7. Photoperiodism.

8. Signal transduction.

SECTION B — ($4 \times 15 = 60$ marks)

Answer ALL questions.

Each question carries 15 marks.

9. (a) Discuss the concept of water potential in connection with plant water relations. How Water potential is measured?

Or

- (b) What are micro nutrients? Discuss their role in Plant growth and development.
10. (a) Explain in detail C4 Photosynthetic pathway and state how it is regarded as efficient than other Carbon assimilation pathways.

Or

- (b) Explain the oxidative Pentose phosphate pathway and its significance.
11. (a) Give a brief account of Biological nitrogen fixation in plants.

Or

- (b) Give an account of synthesis of Fat in plants.
12. (a) What are Polyamines? Discuss their biosynthesis and metabolism in plants.

Or

- (b) What is Phytochrome? How does it differ from chlorophyll and Chytocrome? Brief an account of phytocrome mediated process in plants.
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