

M.Sc. Botany - Ist Sem.**(2118)****Paper: BOT-C514****Plant Physiology****Time allowed: 3 hrs.****Max. Marks: 50****Instruction for candidates:**

Candidates are required to attempt five question, selecting atleast one question from each Section. The fifth question may be attempted from any Section.

Section (A)

Q 1. Write short notes on:

- Raolt's laws. (2.5×4)
- Bioenergetics.
- Biological energy transducers.
- Water potential.

Q 2. Define coupled reaction? Explain the mechanism of oxidative phosphorylation?(2,8)

Section (B)

Q 3. Write short notes on:

(5×2)

- G- proteins.
- Cyclic nucleotides.

Q 4. Explain in brief the signaling mechanism of two component sensor -regulator system in bacteria and plants?(10)

Section (C)

Q 5. Give an account of nitrogen cycle and explain the process of nodule formation in Legumes?
(10)

Q 6. Write short notes on:

- Nitrate toxicity.
- Enzymology of nitrogen fixation.
- Nitrate reduction.
- Ammonium assimilation. (2.5 ×4)

Section (D)

Q 7. Write short notes on:

- Sulphur uptake and transport.
- Reductive sulphate assimilation pathway. (5×2)

Q 8. Write short notes on:

- Glutathione.
- Overview of sulphate assimilation.(5×2)
