

VI Semester B.Sc. Examination, May 2016
(Fresh) (2013-14 and Onwards)
BOTANY (Paper - VIII)
Plant Physiology - II

Max. Marks : 70

Time : 3 Hours

- Instructions :** 1) Answer **all** Parts.
2) **Draw diagrams wherever necessary.**

PART - A

(7×2=14)

A. Answer **any seven** of the following :

- 1) What is solarization ?
- 2) Differentiate Geotropism from Hydrotropism.
- 3) What are allosteric enzymes ?
- 4) Mention the end products of non-cyclic photophosphorylation.
- 5) What is circadian rhythm ?
- 6) What are elementary particles ? What is their function ?
- 7) Draw a neat labelled diagram of the ultrastructure of the chloroplast.
- 8) What is seismonasty ? Give an example.
- 9) What is tracer technique ?

PART - B

(6×4=24)

B. Answer **any six** of the following :

- 10) Explain Hatch and Slack pathway.
- 11) What is vernalization ? Explain the stages.
- 12) Explain induced fit theory of enzyme action.

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- 13) Describe photorespiration.
- 14) Explain the biosynthesis of amino acids in plants.
- 15) Define growth. Explain Sigmoid growth curve.
- 16) Describe the effect of various factors on the rate of respiration.
- 17) Explain nitrogen cycle.

PART - C

C. Answer **any four** of the following :

(4×8=32)

- 18) Explain the steps involved in glycolysis.
 - 19) Describe the process of nitrogen fixation in legumes. Add a note on nif genes.
 - 20) Explain the physiological effects of Gibberellins and their application in agriculture.
 - 21) What are enzymes ? Give the classification of enzymes based on their function.
 - 22) Explain the role of phenolics and alkaloids in plant defence.
 - 23) Describe C₃ pathway.
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