

B.Sc. (With Credits)-Regular-Semester 2012 Sem. V
B.Sc.3507 - Botany : Paper-I (Plant Physiology and Biochemistry)

P. Pages : 2

Time : Three Hours



GUG/W/16/3356

Max. Marks : 50

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw well labelled diagrams wherever necessary.

1. What is transpiration? Explain mechanism of Opening and Closing of Stomata. **10**

OR

Write on : **5x2**

a) Biological Nitrogen Fixation.

b) Role of Micronutrients.

2. Explain properties and role of Lipids in detail. **10**

OR

Write on : **5x2**

a) Chemical structure of Amino acids.

b) Lock & Key Model.

3. Write short notes on – **2¹/₂x4**

a) Properties of water.

b) Ion exchange theory.

c) Beta – oxidation.

d) Properties of enzymes.

OR

e) Plasmolysis. **2¹/₂x4**

f) Nitrogen deficiency symptoms.

g) Structure of Monosaccharides.

h) Holoenzyme.

4. Write short notes on – 2½x4
- a) Significance of Transpiration.
 - b) Donnan Equilibrium Theory.
 - c) Structure of fatty acids.
 - d) Apo – enzyme.

OR

- e) Root Pressure Theory 2½x4
- f) Role of Macronutrients.
- g) Oils and Waxes.
- h) Induced Fit Model.

5. Write in two or three lines only **any ten**. Diagrams are not necessary. 1x10

- a) Osmosis
- b) Cohesion
- c) Guttation
- d) Mg
- e) Root nodules
- f) Nitrate Reductase
- g) Disaccharides
- h) Phospholipids
- i) Sterols
- j) IUB
- k) Co – factor
- l) Polypeptide
