

**5/H-62 (v) (Syllabus-2015)**

**2 0 1 8**

( October )

**BOTANY**

( Honours )

( **Plant Physiology and Biochemistry** )

(BOTH-501)

*Marks : 56*

*Time : 3 hours*

*The figures in the margin indicate full marks  
for the questions*

Answer Question No. 1 which is compulsory and  
other **four**, selecting **one** from each Section

1. Write notes on the following : 4×4=16

(a) Criteria of essentiality of minerals

(b) Kranz anatomy

(c) Types of leaf senescence

(d) First law of thermodynamics

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SECTION—I

2. Write notes on the following : 5+5

(a) Mechanism of active absorption of minerals

(b) Water potential and its significance

3. Differentiate between macronutrients and micronutrients. Give an account of properties and deficiency symptoms of macronutrients. 2+8

SECTION—II

4. Describe the following : 5+5

(a) Structure of chloroplast

(b) Non-cyclic photophosphorylation

5. Write explanatory notes on the following : 5+5

(a) Glycolysis

(b) Photorespiration

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(Continued)

( 3 )

SECTION—III

6. Write notes on the following : 5+5=10

(a) Vernalization and its role in plants

(b) Phytochrome and its significance

7. Write notes on the following : 5+5=10

(a) Physiological effects of gibberellins

(b) Causes of seed dormancy

SECTION—IV

8. (a) Describe in detail the structure of polysaccharides. 5

(b) Classify amino acids based on R group. 5

9. Write notes on the following : 5+5=10

(a) Vitamins as coenzymes

(b) Kinetics of enzyme catalysis

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