

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

2019

(October)

BOTANY

(Honours)

[BOTH-501(T)]

(Plant Physiology and Biochemistry)

Marks : 56

Time : 3 hours

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

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

1. Write notes on the following : 4×4=16
- (a) Deficiency symptoms of magnesium and potassium
 - (b) GOGAT system in ammonia assimilation
 - (c) Significance of critical day length in photoperiodic flowering
 - (d) Chiral carbon and its significance in classifying D and L sugars

(Turn Over)

(2)

SECTION—I

2. Write short notes on the following : 5+5=10

(a) Differences between symport and antiport mechanism of mineral transport

(b) Protein-Lecithin theory

3. Describe the physiological functions and deficiency symptoms of five micro-nutrients. 10

SECTION—II

4. (a) Give a general account of PSI and PSII. 5

(b) Discuss why C_4 pathway of photosynthesis involves spatial separation of carbon fixation and Calvin cycle. 5

5. Give a diagrammatic representation of ETC in mitochondria. Explain how electron transport during respiration leads to generation of ATP. 3+7=10

SECTION—III

6. What are the causes of seed dormancy? Mention in brief how seed dormancy can be regulated. 5+5=10

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(Continued)

(3)

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

(a) Physiological changes during leaf senescence

(b) Physiological effects of gibberellins

SECTION—IV

8. Describe different levels of structural organisation of protein giving suitable diagrams. 10

9. Describe the characteristics of an enzyme active site. Explain the mechanism of enzyme action. 5+5=10

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