

M.Sc. (Part—I) (Semester—II) (CBCS Scheme)
Examination
BOTANY
Paper—VIII
(Plant Metabolism)

Time—Three Hours]

[Maximum Marks—80

- Note :—**(1) All questions are compulsory and carry equal marks.
(2) Draw well labelled diagrams wherever necessary.

1. Write on :—

- | | |
|---|---|
| (a) Properties and functions of carbohydrate in plants. | 5 |
| (b) Biosynthesis of starch. | 5 |
| (c) Pentose phosphate pathway. | 6 |

OR

- | | |
|----------------------------|---|
| (d) Monosaccharides. | 5 |
| (e) Biosynthesis of sugar. | 5 |
| (f) Triose phosphate pool. | 6 |

2. Write on :—

- | | |
|--------------------------------------|---|
| (g) Inorganic nitrogen assimilation. | 5 |
| (h) Biosynthesis of proline. | 5 |

- (i) Protein degradation. 6

OR

- (j) Biosynthesis of amino acids. 5
(k) Synthesis of cytosolic proteins. 5
(l) Modification of protein after translation. 6

3. Write on :—

- (m) Functions of various lipids in plants. 5
(n) Biosynthesis of fatty acids. 5
(o) Catabolism of storage lipids. 6

OR

- (p) Classification and properties of lipids. 5
(q) Synthesis and functions of structural lipids. 5
(r) Steroids. 6

4. Give a detailed account on asymbiotic and symbiotic nitrogen fixation. 16

OR

Give an account on reductive sulphate assimilation pathway. Add note on synthesis of glutathione. 16

5. Give an account on various types of secondary metabolites in plants. 16

OR

Give an account of phosphate metabolism in plants. 16