

Exam. Code : 210003

Subject Code : 4806

M.Sc. (Botany) 3rd Semester

PLANT BIOCHEMISTRY

Paper—BOT-C615

Time Allowed—3 Hours]

[Maximum Marks—50

Note :— Candidates are to attempt 5 questions, one from each section. Fifth question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. Discuss the process of ATP synthesis in detail. Justify ATP as energy currency of cell.
2. Write short notes on the following :
 - (a) pH
 - (b) pI
 - (c) Vander Waals' forces
 - (d) Phosphorylation of proteins.

SECTION—B

3. Describe EMP pathway in detail. Give its energetics and regulation.

4. Discuss HMP pathway in detail. Give its significance.

SECTION—C

5. Discuss *denovo* synthesis of cholesterol in detail. Give its regulation.
6. What are ketone bodies ? Discuss their formation and fate in cell.

SECTION—D

7. Write short notes on the following :
- (a) Enzyme activity
 - (b) Michaelis-Menton constant
 - (c) Allosteric enzyme
 - (d) Turnover number of enzyme.
8. What is enzyme kinetics ? Discuss Michaelis-Menton equation and give its significance.