

2 0 2 6

(FYUGP)

(6th Semester)

BOTANY

(MAJOR)

Paper : BCC-13(T)

(Plant Metabolism)

Full Marks : 75

Pass Marks : 40%

Time : 3 hours

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

- 1. Discuss the role of regulatory enzymes in regulation of metabolism. 15**

Or

Write notes on the following : $7\frac{1}{2} \times 2 = 15$

- (a) Differences between anabolic and catabolic pathway**
(b) Synthesis of starch in plants

2. Explain the electron transport in light reactions of photosynthesis with diagrammatic representations. 15

Or

Write notes on the following : $7\frac{1}{2} \times 2 = 15$

- (a) Crassulacean acid metabolism
- (b) Factors affecting CO_2 reduction

3. Write a note on the chemiosmotic hypothesis. Explain in detail the mechanism of chemiosmosis with labelled diagrams. 15

Or

Write notes on the following : $7\frac{1}{2} \times 2 = 15$

- (a) ATP synthase
- (b) Receptor-ligand interactions

4. Write a detailed note on the synthesis and breakdown of triglycerides. 15

Or

Write notes on the following : $7\frac{1}{2} \times 2 = 15$

- (a) Biological nitrogen fixation
- (b) Ammonia assimilation

(3)

5. Write notes on any *two* of the following :

$7\frac{1}{2} \times 2 = 15$

- (a) Covalent modulation
- (b) Oxidative phosphorylation
- (c) Second messenger concept
- (d) Transamination

★ ★ ★