

Fifth Semester B. Sc. Examination

BOTANY

Paper – I

(Biochemistry and Plant Physiology – I)

Time : Three Hours]

[Max. Marks : 50

- N. B. : (1) All questions are compulsory and carry equal marks.
(2) Illustrate your answers with suitable example and diagrams wherever necessary.

1. Write on :—

- (a) Properties of enzyme. 5
(b) Lock-key and induced fit model of enzyme action. 5

OR

Write short notes on :—

- (c) Aldoses, and ketoses. 2.5
(d) Structure of glucose. 2.5
(e) Holoenzyme. 2.5
(f) Enzyme substrate complex theory. 2.5

2. Write on :—

- (a) Cohesion-adhesion theory. 5
(b) K^+ malate hypothesis. 5



OR

Write short notes on :—

(c) Imbibition.

2.5

(d) Osmosis.

2.5

(e) Diffusion.

2.5

(f) Munch hypothesis.

2.5

3. Write on :—

(a) β oxidation.

5

(b) Glycolysis.

5

OR

Write short notes on :—

(c) Role of N and Fe.

2.5

(d) Carrier concept.

2.5

(e) Krebs's cycle (outline only).

2.5

(f) Alcoholic fermentation.

2.5

4. Write on :—

(a) Calvin cycle.

5

(b) Biological nitrogen fixation.

5

OR

Write short notes on :—

(c) Cyclic photophosphorylation.

2.5

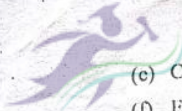
(d) HSK pathway.

2.5

NTK/KW/15 5889

2

Contd.



(e) CAM-pathway.

2.5

(f) Emerson enhancement effect.

2.5

5. Write in **two to three** lines only (any ten). Diagrams are not necessary :—

(a) Apoenzyme.

(b) Waxes.

(c) Peptide bond.

(d) D. P. D.

(e) Ascent of sap.

(f) Osmotic potential.

(g) E.T.S.

(h) RQ.

(i) ATP.

(j) Red drop.

(k) Photolysis of water.

(l) Nitrate reductase.

1 × 10