

Bachelor of Science (B.Sc.) Semester-V Examination
 BOTANY (Biochemistry and Plant Physiology—1) (Old & New)
 Optional Paper—1
 (New)

Time : Three Hours]

[Maximum Marks : 50

N.B. :— (1) ALL questions are compulsory and carry equal marks

(2) Draw well labelled diagrams and write examples wherever necessary.

- 1 Write on 5×2
- (a) Properties of Enzymes
- (b) Structure of Glucose.

OR

Write short notes on 2.5×4

- ~~(c)~~ Role of oils and waxes
- ~~(d)~~ Lock and key model
- ~~(e)~~ Holoenzyme and apoenzyme
- (f) β -oxidation.

- 2 Write on : 5×2
- (a) Diffusion and osmosis
- (b) K^+ -Malate hypothesis

OR

Write short notes on 2.5×4

- ~~(c)~~ Properties of water
- ~~(d)~~ Cohesion-Adhesion Theory
- ~~(e)~~ Munch Hypothesis
- ~~(f)~~ Imbibition.

3. Write on : 5×2
- (a) Carrier concept in solute transport
- (b) TCA—cycle.

OR

Write short notes on 2.5×4

- ~~(c)~~ Role and deficiency symptoms of Fe
- ~~(d)~~ Glycolysis (outline only)
- (e) ETS
- (f) Alcoholic fermentation.

4. Write on :

5×2

- (a) Biological nitrogen fixation
- (b) Non-cycle photophosphorylation.

OR

Write short notes on .

2.5×4

- (c) Photosynthetic pigments and its role
- (d) Emerson's effect and red drop
- (e) HSK-pathway
- (f) C-3 pathway (outline only).

5. Write in two to three lines only (any FIVE). Diagram are not necessary :

1×10

- (a) Peptide bond
- (b) Ketoses
- (c) Co-enzyme
- (d) DPD
- (e) Root pressure
- (f) Transpiration
- (g) Donnan's equilibrium
- (h) Trace-elements
- (i) Photorespiration
- (j) RUBISCO
- (k) CAM-plants
- (l) Nitrate reductase.