

B.Sc. CBCS Pattern Semester-III  
**012B - Botany Paper-II : Plant Biochemistry and Physiology**

P. Pages : 2

Time : Three Hours



**GUG/W/23/11599**

Max. Marks : 50

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- Notes : 1. All questions are compulsory.  
2. Illustrate your answers with suitable examples and draw well labelled diagrams wherever necessary.

1. Write notes on.
- a) Polysaccharide. 5
- b) Primary structure of protein. 5

**OR**

Write short notes on.

- c) Aldoses and Ketoses. 2½
- d) Uses of Fatty acids. 2½
- e) Structure of amino acids. 2½
- f) Sphingolipids. 2½
2. Write notes on.
- a) Biological nitrogen fixation. 5
- b) Nomenclature of Enzymes (IUB system). 5

**OR**

Write short notes on.

- c) Role & deficiency symptom of phosphorus. 2½
- d) Lock and key model of enzymes. 2½
- e) Role and deficiency symptom of magnesium. 2½
- f) Nitrate reductase. 2½
3. Write note on.
- a) K<sup>+</sup> & malate theory. 5
- b) Cohesion- adhesion theory. 5

**OR**

Write short notes on.

- c) Osmosis. 2½
- d) Carrier concept. 2½
- e) Guttation. 2½
- f) Munch hypothesis. 2½

**4.** Write note on.

- a) Kreb's / TCA cycle. 5
- b) C3 Pathway/ Calvin cycle. 5

**OR**

- c) R.Q. 2½
- d) CAM Pathway. 2½
- e) Cyclic photophosphorylation. 2½
- f) Fermentation. 2½

**5.** Write **any ten** in one or two lines (Diagrams not necessary). **10**

- a) Peptide bond.
- b) Sucrose.
- c) Waxes.
- d) Prosthetic group.
- e) Chloerosis.
- f) Holoenzyme.
- g) Guard cell.
- h) Water potential.
- i) Diffusion.
- j) C4 plants.
- k) Reaction center.
- l) ATP.

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