

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

P. Pages : 2

Time : Three Hours



GUG/S/25/11599

Max. Marks : 50

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw well labelled diagrams wherever necessary.

1. Write notes on

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|-----------------------------------|----------|
| a) Structure of polysaccharides. | 5 |
| b) Classification of Amino Acids. | 5 |

OR

Write short notes on

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|-----------------------------------|-----------|
| c) Primary structure of proteins. | 2½ |
| d) Sphingolipids | 2½ |
| e) Aldoses and Ketoses | 2½ |
| f) Properties of Lipids. | 2½ |

2. Write notes on:

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|----------------------------------|----------|
| a) Lock and key model. | 5 |
| b) Biological Nitrogen fixation. | 5 |

OR

Write short notes on:

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|---|-----------|
| c) Properties of Enzymes. | 2½ |
| d) Role of Potassium and Nitrogen. | 2½ |
| e) Deficiency symptoms of copper and ferrous. | 2½ |
| f) Importance of Nitrate Reductase. | 2½ |

3. Write notes on:

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|--|----------|
| a) Ascent of Sap (Cohesion-Adhesion Theory) | 5 |
| b) K^+ Malate theory of stomatal movement. | 5 |

OR

Write short notes on:

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|----------------------|----|
| c) Plasmolysis. | 2½ |
| d) Guttation | 2½ |
| e) Carrier concept. | 2½ |
| f) Munch Hypothesis. | 2½ |

4. Write notes on:

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|-------------------------|---|
| a) C ₃ cycle | 5 |
| b) Krebs cycle. | 5 |

OR

Write short notes on:

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|---|----|
| c) Cyclic photophosphorylation | 2½ |
| d) Red drop & Emerson's Enhancement effect. | 2½ |
| e) Structure of ATP | 2½ |
| f) Factors affecting Respiration. | 2½ |

5. Write **any ten** questions in one or two sentences. (Diagrams are not necessary). **1x10**

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|------------------------|-----------------|
| a) Monosaccharides | b) Sterols |
| c) Peptide bond | d) Co-factor. |
| e) Nitrite | f) Chlorosis |
| g) Diffusion | h) Tracheids |
| i) Passive absorption. | j) CAM. |
| k) Action spectra | l) Fermentation |
