



Date: 27-10-2018  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**PART – A**

Answer the following, each within about 50 words.

(10 × 2 = 20 marks)

1. What is DPD?
2. Define guttation.
3. What are aeroponics?
4. Comment on Donnan's equilibrium.
5. Distinguish between cyclic and non-cyclic phosphorylation.
6. What are quantosomes?
7. Expand GOGAT and mention its significance.
8. What is Gluconeogenesis?
9. State the physiological effect of gibberellins.
10. What is Vernalization?

**PART – B**

Answer the following, each within 500 words. Draw diagrams wherever necessary.

(5 × 7 = 35 marks)

11. a. State the physical properties of water. Add a note on its biological importance.

(or)

- b. Write an account on ascent of sap in plants.

12. a. Explain the mechanism of active transport of minerals.

(or)

- b. Give a brief account on hydroponics.

13. a. Explain briefly about Hatch – Slack pathway.

(or)

- b. Write short notes on light reaction.

14. a. Write an account on glycolysis.  
(or)  
b. Describe the symbiotic nitrogen fixation in legumes.

15. a. Discuss the forms of phytochrome and their role in flowering.  
(or)  
b. Write short notes on dormancy of seeds.

**PART – C**

Answer **any three** of the following, each within 1200 words. Draw diagrams wherever necessary.

**(3 × 15 = 45 marks)**

16. Write an essay on the stomata and their role in transpiration.
17. List out the specific role and deficiency symptoms of any 5 mineral elements.
18. Explain in detail about the Calvin cycle.
19. Describe Kreb's cycle. Add a note on the number of ATP molecules generated on complete oxidation of glucose.
20. What are growth hormones? Describe the physiological effect and practical application of auxin and gibberellin.

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