

Time: 2.30 Hours

Marks: 75

Instructions:

- i) All questions are compulsory
- ii) All questions carry equal marks
- iii) Figures to the right indicates full marks
- iv) Draw neat labeled diagrams wherever necessary

Q. 1: Do as directed (any 15)

15

Fill in the blank

1. The CO₂ acceptor in C₄ plants is _____
2. Light harvesting complex-II is located in the _____
3. Carbon assimilation phase is also called as _____
4. _____ promotes growth of shoots at a relatively higher concentration.
5. The C₄ cycle may also be referred to as _____
6. _____ is the only gaseous hydrocarbon hormone
7. _____ are also called as man-made or man engineered ecosystem

Define:

8. Photosynthesis
9. Enzymes
10. Assimilation of food
11. Anticoagulants
12. Blood pressure
13. Decomposers
14. Food chain
15. Water cycle
16. Primary productivity

Answer the following:

17. Give the function of efferent renal arteriole
18. Give the importance of pulmonary vein in mammalian heart
19. Give the significance of Vitamin K in clotting
20. Give the role of salivary amylase in digestion

Q. 2:

- a) Write the Interrelationships between Light and Dark Reaction
- b) Write short note on C₄ cycle

8
7

OR

- c) Write short note on Photorespiration
- d) Write the important roles of Abscissic acid

8
7

Q. 3:

- a) Describe the internal structure of a mammalian heart with a neat labelled diagram 8
 - b) Give an account of structure of haemoglobin and its polymorphism 7
- OR
- c) Define and explain aerobic and anaerobic respiration 8
 - d) Describe the structure and function of Nephron 7

Q. 4:

- a) Elaborate on non-living and living components of an ecosystem. 8
 - b) Explain in detail about any one type of ecological pyramid. 7
- OR
- c) Explain in detail about parasitism with suitable examples 8
 - d) Describe carbon cycle in detail. 7

Q. 5: Write short notes on (any three)

15

1. Secondary Metabolites
2. Auxins
3. Gastric digestion
4. RBC
5. Function of an ecosystem.