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 CO_2 acceptor in C_4 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 C_4 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 **8**
b) Write short note on C_4 cycle **7**

OR

c) Write short note on Photorespiration **8**
d) Write the important roles of Abscissic acid **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.
