

*General Instruction :-**Answer the following questions with examples and diagrams wherever necessary.*

1. Describe two conditions that lead to Guttation. (1)
2. What is the relationship between water potential, solute concentration and atmospheric pressure ? (1)
3. Enlist any four mechanisms that contribute to the ascent of sap in tall trees. (1)
4. Give scientific reason for the following:-
Iron is not a constituent of chlorophyll but it's deficiency causes chlorosis? (1)
5. Why is that in certain plants deficiency symptoms appear first in younger parts of the plant while in others they do so in mature organs? (2)
6. What are symplast and apoplast pathways of absorption of water in plants ? (2)
7. How is nitrogenase enzyme protected by pigment leghaemoglobin? (2)
8. Explain osmosis by an experiment with the help of brief explanation and diagrams. (2)
9. How do facilitated diffusion and active transport differ? (2)
10. A plant cell with 0.5 % concentration of salt in its cell sap is placed in a solution with 5% concentration of salt. Answer the following and draw the related diagrams :- (1x3=3)
 - i) What will happen to the cell?
 - ii) How will you describe the concentration of the outside solution?
 - iii) What changes are required to bring back the normancy of the cell?
11. Represent diagrammatically the N₂ cycle in nature. (3)

-X-X-X-X-X-X-

*General Instruction :-**Answer the following questions with examples and diagrams wherever necessary.*

1. Describe two conditions that lead to Guttation. (1)
2. What is the relationship between water potential, solute concentration and atmospheric pressure ? (1)
3. Enlist any four mechanisms that contribute to the ascent of sap in tall trees. (1)
4. Give scientific reason for the following:-
Iron is not a constituent of chlorophyll but it's deficiency causes chlorosis? (1)
5. Why is that in certain plants deficiency symptoms appear first in younger parts of the plant while in others they do so in mature organs? (2)
6. What are symplast and apoplast pathways of absorption of water in plants ? (2)
7. How is nitrogenase enzyme protected by pigment leghaemoglobin? (2)
8. Explain osmosis by an experiment with the help of brief explanation and diagrams. (2)
9. How do facilitated diffusion and active transport differ? (2)
10. A plant cell with 0.5 % concentration of salt in its cell sap is placed in a solution with 5% concentration of salt. Answer the following and draw the related diagrams :- (1x3=3)
 - i) What will happen to the cell?
 - ii) How will you describe the concentration of the outside solution?
 - iii) What changes are required to bring back the normancy of the cell?
11. Represent diagrammatically the N₂ cycle in nature. (3)

-X-X-X-X-X-X-