

Biology (New Book) - 9th Class Biology English Medium Chapter 9 Preparation

Q1. What is the role of nitrogen and magnesium in plant growth?

Ans 1: Role of Nitrogen:

- i. Nitrogen is a necessary part of all proteins, enzymes and nucleic acids.
- ii. It is also a part of chlorophyll.
- iii. Plant roots absorb nitrogen in the form of nitrates.
- iv. Carnivorous plants trap and digest small animals. Such plants fulfil their needs of nitrogen from the prey animals.

Ans 2: Role of Magnesium:

- i. Magnesium is part of the chlorophyll.
- ii. It also activates many plant enzymes needed for growth.
- iii. It also helps in fruit formation and germination of seeds.
- iv. Platn roots absorb magnesium in ionic form.

Q2. Name soem waste products of plants.

Ans 1: i. CO2

- ii. Extra Oxygen
- iii. Excess water
- iv. Calcium oxalate
- v. Latex
- vi. Resins
- vii. Gums.

Q3. Difference between Hydrophytes and Halophytes.

Ans 1: Hydrophytes:

- i. These plants live in water rich environments.
- ii. Rate of transpiration is highest.
- iii. Stomata ar epresent on the upper surface of leaf.
- iv. These plans have thin cuticle.

Ans 2: Halophytes:

- i. These plans live in sea water and are adapted to salty environments
- ii. Salts enter in the bodies of such plants due to their higher concentration in sea wate, water tends to move out of their cells into the hypertonic sea water.

Example:

Many sea grasses are included in this group of plant.

Q4. Transport is the loss ow water from plants, Is it a harmful phenomenonn? If no. what is its importance.

Ans 1: Transpiration is a necessary eveil It is harmful during he condition of drouhght. As wate loss cause wilting of the plant. But at the same time it is important for plant as it cause cooling effect, genertes transpirational pull and helps in gaseous exchange.

Q5. Difference between Transpiraton and Guttaion

Ans 1: Transpiration:

1. Plants absorb waer from the soil by the roots. This absorbed water moves in the aerial parts of the plant from where the most of this water has been lost in the form of vapours into the atmosphere.

This loss is called transpiration.

- ii. Transpiration always occur against the gravity
- iii. Transpiration involves mainly the xylem cells.

Ans 2: Guttation:

- i. The appearance of drops of water on the tips or edges of leaes is called guttation.
- ii. Guttation is not to be confused with dew which condenses from the atmosphere on to the plant surfce.
- iii. Some plants such as sea grasses and strawberry force this wate throuth special pores present at leaf tips or edges and form drops.
- Q6. How do the plants of rubber and keekar excrete their wastes.
 - Ans 1: Plants deposit many metabloic wastes in their bodies as harmless insoluble materials.
 - i. Latex are removed by rubber plants.
 - ii. Gums are removed by keekar.
- Q7. Difference between Macronutrients and Micronutrients.
 - **Ans 1:** The minerals which are required in larger quantities are calle dmacronutrients e.g. carbon. hydrogen, oxygen, phosphorus, potassium, nitrogen sulphur, calcium, and magnesium.

Ans 2: Micronutrients:

The minerlas which are required in lower quantities are called micronutriensts e.g. iron, molybdenum, boron, copper, mangnaese, zinc, chlorine, and nickel.

Q8. Define Adhesion

Ans 1: Adhesion is the attraction between water molecules and other substances. Water is strongly attracted to the walls of the exylem cells because both water and cellulose are polar molecules. This adhesion helps water move upward in the plant against gravigy. It also keeps water in the exylem when trnaspiation is not happening.

Q9. Define Minieral nutrition in plants.

Ans 1: Plants get eheir food from a process celled photosytheisis. But for the synthesis of other biomolecules, they need other materials from soil. Such materials are called mineral nutrienss and the process through which these special chemials absorbed from soil that ar eessential for the plants to grow is called mineals nutrition.

Q10. What is transport in plants?

Ans 1: Definition:

Transport eans the movement of substances, such as water, nutrients, hormones, and waste products within an organism.