

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

Q1. Define Mineral nutrition in plants.

**Ans 1:** Plants get their food from a process called photosynthesis. But for the synthesis of other biomolecules, they need other materials from soil. Such materials are called mineral nutrients and the process through which these special chemicals absorbed from soil that are essential for the plants to grow is called mineral nutrition.

Q2. Difference between Transpiration and Guttation

**Ans 1:** Transpiration :

i. Plants absorb water 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 occurs 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 leaves is called guttation.

ii. Guttation is not to be confused with dew which condenses from the atmosphere on to the plant surface.

iii. Some plants such as sea grasses and strawberry force this water through special pores present at leaf tips or edges and form drops.

Q3. Transpiration is the loss of water from plants, Is it a harmful phenomenon? If no. what is its importance.

**Ans 1:** Transpiration is a necessary evil. It is harmful during the condition of drought. As water loss causes wilting of the plant. But at the same time it is important for a plant as it causes a cooling effect, generates transpirational pull and helps in gaseous exchange.

Q4. State the roles of nitrogen and magnesium in plants.

**Ans 1:** Nitrogen:

i. Nitrogen is a necessary part of all proteins, enzymes, nucleic acids and chlorophyll.

ii. Nitrogen helps plants for rapid growth, increasing seed and fruit production and improving the quality of leaf

iii. Plant roots absorb nitrogen in the form of nitrates

iv. Carnivorous plants fulfil their needs of nitrogen from the prey animals.

**Ans 2:** 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. Plant roots absorb magnesium in ionic form.

Q5. Name some waste products of plants.

**Ans 1:** i. CO<sub>2</sub>

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

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Q6. 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.

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Q7. How is transpirational pull importnat in plants.

**Ans 1:** Transpiration creates a pull called transpiration pull which is principally repponsble for the conduction of wate and salsts from roots to the aerial part of the plant body.

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Q8. 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.

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Q9. Differenc between nutrition and nutrients.

**Ans 1:** Nutrition:

Nutrition means the processes in which food is prepared or obtained and converted into body substances for growth and energy

**Ans 2:** Nutrients:

Nutrients are teh substances required by organisms for energy, growth, repair , and maintenances.

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Q10. 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 inthe plant against gravigy. It also keeps water in the exylem when tnaspiation is not happening.

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