The Root System

A. Choose the Correct Answer:

1. What is the main function of roots in a plant?

A) To absorb water and nutrients
B) To produce flowers
C) To make food for the plant
D) To protect the leaves

2. Which type of root system is commonly found in grass?

A) Taproot
B) Fibrous root
C) Aerial root
D) Prop root

3. What helps roots absorb water from the soil?

A) Flowers
B) Root hairs
C) Stem
D) Fruits

B. Fill in the Blanks:

1. The root system helps in _____ and _____ the plant in the soil.
2. A taproot system has one main _____ with smaller roots growing from it.
3. Fibrous roots are mostly found in _____ plants.

C. Case Study:

A group of students conducted an experiment to study how roots absorb water.

They placed three plants in different conditions:

- Plant A was given enough water and kept in sunlight.
- Plant B was not watered for a week.
- Plant C had its roots partially cut.

After observing the plants for ten days, they noticed:

- Plant A was healthy and growing well.
- Plant B started wilting, and its leaves became dry.

- Plant C showed weak growth and had yellowing leaves.

Case Study Questions:

1. What was the purpose of this experiment?
2. Why did Plant B start wilting after a few days?
3. How did cutting the roots affect Plant C?
4. Based on the experiment, why are roots important for plants?

D. Short Answer Questions:

1. What are the two main types of root systems?
2. How do roots help in holding soil together?
3. Name two plants with taproots and two plants with fibrous roots.

E. Long Answer Questions:

1. Explain the difference between taproot and fibrous root systems with examples.
2. How do roots help plants in absorbing water and nutrients from the soil?
3. Describe how some special types of roots, like prop roots and aerial roots, help