

Advanced Plant Biology and Nature Science

Biology · Answer Key · 15 Questions

1. Which specific part of a plant is primarily responsible for the process of transpiration?

- A) The roots
- B) The stomata on leaves**
- C) The xylem vessels
- D) The flower petals

2. What is the primary function of the waxy cuticle layer found on the surface of most plant leaves?

- A) To attract pollinators
- B) To absorb sunlight
- C) To prevent excessive water loss**
- D) To provide structural support

3. In the life cycle of a fern, what is the structure that releases spores called?

- A) Sorus**
- B) Stamen
- C) Pistil
- D) Rhizome

4. Which plant hormone is responsible for the phenomenon of phototropism, causing stems to grow towards light?

- A) Gibberellin
- B) Cytokinin
- C) Auxin**
- D) Ethylene

5. What is the main role of the xylem tissue in a vascular plant?

- A) Transporting sugars from leaves
- B) Transporting water from roots**
- C) Protecting the stem
- D) Storing starch

6. Which of these plants is classified as a monocotyledon?

- A) Oak tree
- B) Bean plant
- C) Maize**
- D) Rose bush

7. What is the name of the male reproductive part of a flowering plant?

- A) Stigma
- B) Style
- C) Ovary
- D) Stamen**

8. In the soil profile, which horizon contains the most organic matter, often referred to as humus?

- A) A horizon**
- B) B horizon
- C) C horizon
- D) R horizon

9. Which process involves the movement of pollen from the anther to the stigma?

- A) Fertilization
- B) Germination
- C) Pollination**
- D) Photosynthesis

10. What are the root-like structures found in non-vascular plants like mosses called?

- A) Taproots
- B) Adventitious roots
- C) Rhizoids**
- D) Fibrous roots

11. Which nutrient is most commonly associated with healthy leaf growth and is a key component of chlorophyll?

- A) Phosphorus
- B) Potassium
- C) Nitrogen**
- D) Calcium

12. What term describes a plant that completes its entire life cycle in one growing season?

- A) Perennial
- B) Biennial
- C) Annual**
- D) Deciduous

13. What is the chemical byproduct of photosynthesis that is released into the atmosphere?

A) Carbon dioxide

B) Oxygen

C) Glucose

D) Nitrogen

14. Which part of the flower develops into the fruit after fertilization?

A) Ovule

B) Anther

C) Ovary

D) Sepal

15. What allows desert plants like cacti to minimize water loss through their leaves?

A) Broad flat leaves

B) Modified spines

C) Large stomata

D) Fast growth rates