

Botany Essentials for Teens

Botany · Answer Key · 15 Questions

1. Which plant tissue is responsible for transporting water and dissolved minerals from the roots to the leaves?

- A) Phloem
- B) Xylem**
- C) Cambium
- D) Epidermis

2. What is the primary pigment involved in photosynthesis, responsible for absorbing light energy?

- A) Carotene
- B) Anthocyanin
- C) Chlorophyll**
- D) Xanthophyll

3. Which part of a flower develops into a fruit after fertilization?

- A) Ovary**
- B) Stamen
- C) Petal
- D) Sepal

4. What process allows plants to release water vapour into the atmosphere through their stomata?

- A) Respiration
- B) Transpiration**
- C) Photosynthesis
- D) Germination

5. Which group of plants produces seeds enclosed within a fruit?

- A) Gymnosperms
- B) Bryophytes
- C) Angiosperms**
- D) Pteridophytes

6. In plant cells, which organelle is the site of cellular respiration?

- A) Chloroplast
- B) Mitochondrion**
- C) Vacuole
- D) Ribosome

7. What is the main function of root hairs in a plant?

- A) Photosynthesis
- B) Support
- C) Increasing surface area for absorption**
- D) Storage of starch

8. Which hormone is primarily responsible for the ripening of fruits?

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

9. What is the name of the waxy, waterproof layer on the surface of leaves that reduces water loss?

- A) Cuticle**
- B) Stoma
- C) Mesophyll
- D) Petiole

10. Which of these describes a monocot plant?

- A) Two cotyledons
- B) Parallel leaf venation**
- C) Taproot system
- D) Floral parts in multiples of four or five

11. What is the symbiotic relationship between plant roots and fungi called?

- A) Mycorrhiza**
- B) Rhizobia
- C) Lichen
- D) Nitrogen fixation

12. Which mineral element is a central component of the chlorophyll molecule?

- A) Iron
- B) Magnesium**
- C) Calcium
- D) Potassium

13. What term describes the directional growth of a plant in response to light?

- A) Geotropism
- B) Thigmotropism
- C) Phototropism**
- D) Hydrotropism

14. Which plant structure contains the male gametes (pollen grains)?

A) Anther

B) Ovary

C) Style

D) Stigma

15. What gas do plants primarily consume from the atmosphere during the light-dependent reactions of photosynthesis?

A) Oxygen

B) Nitrogen

C) Carbon dioxide

D) Hydrogen