

Botany Essentials for Teens

Botany · Practice Test · 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