

Advanced Horticulture Concepts

Horticulture · Answer Key · 18 Questions

1. Which plant hormone is primarily responsible for promoting cell elongation and plays a crucial role in phototropism and apical dominance?

- A) Absciscic Acid (ABA)
- B) Cytokinin
- C) Gibberellin

D) Auxin

2. In soil science, what is the term for the force that holds water molecules to soil particles, a major factor in available water for plants?

- A) Cohesion
- B) Adhesion**
- C) Capillary Action
- D) Osmosis

3. What is the process by which plants absorb atmospheric carbon dioxide for photosynthesis?

- A) Transpiration
- B) Respiration
- C) Stomatal Influx**
- D) Guttation

4. Which type of grafting technique involves inserting a single bud from one plant onto the rootstock of another?

- A) Cleft Grafting
- B) Whip and Tongue Grafting
- C) Budding**
- D) Bridge Grafting

5. The 'pH' of a soil solution refers to its concentration of which ion?

- A) Hydroxide (OH⁻)
- B) Hydrogen (H⁺)**
- C) Ammonium (NH₄⁺)
- D) Nitrate (NO₃⁻)

6. What is the primary function of the phloem in vascular plants?

- A) Transport of water and minerals
- B) Storage of starch
- C) Transport of sugars (photosynthates)**
- D) Support and structural integrity

7. Which class of fungicides is known for its ability to disrupt cell membrane function in fungi by interacting with sterols?

- A) Strobilurins
- B) Triazoles**
- C) Dicarboximides
- D) Anilinopyrimidines

8. What is the term for the phenomenon where a plant embryo within a seed remains dormant and does not germinate, even under favourable conditions?

- A) Stratification
- B) Vernalization
- C) Dormancy**
- D) Senescence

9. In plant breeding, what is the process of crossing two genetically dissimilar parent plants to produce offspring with desirable traits?

- A) Self-pollination
- B) Backcrossing
- C) Hybridization**
- D) Apomixis

10. What is the critical factor that distinguishes hydroponics from aquaponics?

- A) The presence of artificial light
- B) The use of nutrient solutions
- C) The integration of fish to provide nutrients**
- D) The absence of soil

11. Which physiological disorder in fruits, often exacerbated by calcium deficiency and rapid growth, leads to browning and decay of the blossom end?

- A) Bitter Pit**
- B) Russetting
- C) Sunscald
- D) Anthracnose

12. What is the ideal soil texture for most horticultural crops, balancing water retention and drainage?

- A) Sandy
- B) Clay
- C) Silty
- D) Loamy**

13. What is the process by which light energy is converted into chemical energy in the form of glucose during photosynthesis?

- A) Photolysis
- B) Carbon Fixation
- C) Photophosphorylation**
- D) Electron Transport Chain

14. Which type of propagation involves using fragments of leaves, stems, or roots to create new, genetically identical plants?

- A) Sexual Propagation
- B) Seed Propagation
- C) Vegetative Propagation**
- D) Grafting

15. What is the term for a plant that completes its life cycle, including flowering and seed production, within a single growing season?

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

16. In entomology, what is the term for the beneficial insects that prey upon or parasitize pest insects?

- A) Herbivores
- B) Predators**
- C) Pathogens
- D) Parasitoids

17. What is the scientific term for the study of plant diseases and the pathogens that cause them?

- A) Agronomy
- B) Horticulture
- C) Phytopathology**
- D) Pomology

18. Which nutrient is essential for nitrogen fixation in legumes and is also a component of amino acids and proteins?

- A) Phosphorus (P)
- B) Potassium (K)
- C) Nitrogen (N)**
- D) Sulfur (S)