Advanced Horticulture Knowledge

Horticulture · Answer Key · 20 Questions

1. Which process involves the movement of water from the soil into the root system due to lower water potential in the roots?

A) Transpiration
B) Osmosis
C) Photosynthesis
D) Respiration

2. What is the primary function of the plant hormone gibberellin in commercial horticulture?

A) Inducing fruit ripening
B) Promoting stem elongation
C) Inhibiting weed growth
D) Stimulating root formation

3. Which soil horizon is primarily composed of organic matter in various stages of decomposition?

A) O Horizon
B) A Horizon
C) B Horizon
D) C Horizon

4. In plant propagation, what is the specific biological purpose of 'scarification' for seeds?

A) Adding nutrients to the seed coat
B) Removing pathogens from the surface
C) Breaking physical dormancy of the seed coat
D) Increasing light sensitivity

5. Which macronutrient is primarily responsible for vigorous leaf growth and the production of chlorophyll?

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

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6. What type of plant life cycle completes its entire development from seed to seed in exactly two growing seasons?

A) Annual
B) Perennial
C) Biennial
D) Ephemerous

7. Which pruning technique involves removing a large branch back to its point of origin or to a lateral branch large enough to assume dominance?

A) Heading back
B) Thinning cut
C) Pinching
D) Disbudding

8. What is the term for the biological mechanism where a plant responds to the length of day or night to initiate flowering?

A) Phototropism
B) Photoperiodism
C) Thigmotropism
D) Gravitropism

9. Which greenhouse environmental factor is measured using a hygrometer?

A) Light intensity
B) Soil pH
C) Relative humidity
D) Carbon dioxide concentration

10. What is the function of the cambium layer in woody plants?

A) Transporting mineral nutrients
B) Protecting the inner vascular tissue
C) Producing secondary xylem and phloem
D) Storing excess starch

11. Which of the following is a common symptom of a plant experiencing chlorosis?

A) Rapid fruit drop
B) Yellowing of leaves due to lack of chlorophyll
C) Excessive wilting during the night
D) Rapid elongation of internodes

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12. What is the primary reason for 'hardening off' greenhouse-grown transplants before moving them outdoors?

A) To acclimatize plants to lower humidity and higher light intensity
B) To induce early flowering
C) To remove dormant insects
D) To increase the soil nutrient density

13. Which component of the soil texture triangle represents the smallest soil particle size?

A) Sand
B) Silt
C) Clay
D) Loam

14. In sexual reproduction of flowering plants, where does the pollen grain land to initiate fertilization?

A) Stamen
B) Ovary
C) Stigma
D) Sepal

15. What is the horticultural term for the practice of growing plants in a nutrient-rich water solution without soil?

A) Aeroponics
B) Aquaponics
C) Hydroponics
D) Geoponics

16. Which plant tissue is responsible for the transport of sugars (photosynthates) from leaves to the rest of the plant?

A) Xylem
B) Phloem
C) Epidermis
D) Cortex

17. What does the N-P-K number on a fertilizer bag represent?

A) Nitrogen, Phosphorus, Potassium
B) Nitrogen, Potassium, Phosphorus
C) Nitrate, Phosphate, Kelp
D) Nitrogen, Protein, Potassium

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18. Which type of grafting involves joining a scion of one plant to the rootstock of another to combine desirable traits?

A) Layering
B) Budding
C) Division
D) Cutting

19. What is the main role of mycorrhizal fungi when associated with plant roots?

A) Causing disease in the root system
B) Increasing the surface area for nutrient and water uptake
C) Producing toxic substances to deter herbivores
D) Preventing pollination

20. What is the specific term for the loss of water vapor from the aerial parts of a plant, primarily through the stomata?

A) Guttation
B) Transpiration
C) Respiration
D) Photosynthesis

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