

Horticulture Mastery Challenge

Horticulture · Answer Key · 8 Questions

1. Which plant hormone is primarily responsible for promoting cell elongation and is often applied exogenously to increase fruit size in some crops?

- A) Cytokinin
- B) Absciscic Acid (ABA)
- C) Gibberellin (GA)**
- D) Ethylene

2. The process of vernalisation, crucial for the flowering of certain temperate plants like winter cereals, requires exposure to what specific environmental condition?

- A) High temperatures for an extended period
- B) Extended periods of darkness
- C) Prolonged exposure to low temperatures**
- D) Intense light with specific wavelengths

3. In soil science, the term 'cation exchange capacity' (CEC) refers to a soil's ability to hold and exchange positively charged ions. Which soil particle type generally exhibits the highest CEC?

- A) Sand particles
- B) Silt particles
- C) Clay particles and organic matter**
- D) Gravel

4. Hydroponics is a method of growing plants without soil. Which of the following essential macronutrients is crucial for nitrogen fixation in legumes when grown hydroponically?

- A) Phosphorus
- B) Potassium
- C) Molybdenum**
- D) Magnesium

5. Which common horticultural practice involves intentionally wounding plant tissues to stimulate the production of secondary metabolites, often with medicinal or insect-repellent properties?

- A) Stratification
- B) Girdling**
- C) Pruning
- D) Hardening off

6. The colouration in many fruits and vegetables, such as the red of tomatoes or the orange of carrots, is largely due to the presence of which group of plant pigments?

- A) Anthocyanins
- B) Chlorophylls
- C) Carotenoids**
- D) Flavonoids

7. When discussing plant diseases, the term 'etiolation' describes a specific physiological disorder in plants. What is the primary cause of etiolation?

- A) Excessive watering
- B) Nutrient deficiency, particularly nitrogen
- C) Inadequate light exposure**
- D) High soil pH

8. In grafting, the part of the scion that contains the desired buds or shoots is specifically referred to as the:

- A) Rootstock
- B) Cambium layer
- C) Whip
- D) Inarching bud**