

(答案請寫在試題紙上，請註明題號，不用抄題目)

一、解釋下列專有名詞。(每小題 2 分，共 10 分)

1. Parthenocarp
2. Accessory fruits
3. Fruit tree training
4. Symplastic loading
5. Regulated deficit irrigation

二、今有一果園出現生理障礙，新梢葉片呈杯狀葉，並有葉緣壞疽，果實頂端易軟化，貯藏能力差，請診斷為何種礦物營養障礙，並說明在植物體之功能及改善障礙之方法。(10 分)

三、落葉果樹為求生存，特定季節具休眠(dormancy)之現象，而休眠依其生理屬性可分為三種。請以台灣高海拔栽培之'富士'蘋果為例，推論在下列三階段，樹體各處於何種屬性之休眠：
1) 夏末秋初，葉片尚未掉落；2) 嚴冬，葉片早已完全掉落；3) 初春，但尚未能萌芽。(10 分)

四、試說明栽培蔬菜時使用有機質肥料之優點、缺點及目前農民常用有機質肥料種類。(10 分)

五、灌溉為蔬菜栽培生產上重要一環，試述灌溉的方式有那幾種，並依其效率由高至低加以排序。(10 分)

六、試說明蔬菜栽培上造成鹽分地之原因？其對蔬菜生長發育之影響？如何改善此土壤？。(10 分)

七、試比較在臺灣栽培四季蘭與虎頭蘭的生長開花習性差異。(每小題 2 分，共 10 分)

1. 營養芽萌發期
2. 花芽分化期
3. 花莖發育快慢
4. 天然開花期
5. 盆花觀賞壽命長短

八、試說明造成洋桔梗簇生化原因及如何克服簇生化。(10 分)

九、複合肥料(不含有機肥)通常以三組數字(如：20-20-20)代表其三要素成份配比，有時會見到四組數字(如：15-15-15-4)，且會有“花卉用”的標示。請問這第四組數字代表甚麼？並說明此一肥料成份與花卉生長之間的關係。(10 分)

十、試將下列英文翻譯成中文。(10 分)

Vegetable transplant production in high-density plug trays can induce excessive stem elongation as a result of shade avoidance responses. Consequently, their field establishment can be slow and non-uniform, potentially delaying early harvest and limiting marketable yield. Abscisic acid (ABA) can act as a physiological inhibitor of stem elongation in some vegetable transplants. In contrast to gibberellin inhibitors, ABA can be rapidly inactivated in plant tissues by oxidation or conjugation, suggesting that it may be more suitable for vegetable transplants because of its transient growth-inhibitory effects. However, high-dose applications of ABA have negative side effects such as leaf chlorosis and abscission. Therefore, the overall growth modification must be considered to further optimize ABA application methods for height control.