

※ 注意：請於試卷內之「非選擇題作答區」作答，並應註明作答之題號。

Part A

(A) Terminology (4 points each)

1. Acclimation and adaption
2. Absorption spectrum and action spectrum
3. Symplast and apoplast
4. Cavitation and embolism
5. Biotic stress and abiotic stress
6. C₂ glycolate cycle

(B) Questions

1. Please describe cyclic and noncyclic photophosphorylation, What is the physiological significance? 8%
2. What is the photorespiration? What is its physiological significance? 10%
3. What is the role of PII proteins in the assimilation of NH₄⁺? 8%

Part B

1. 簡述下列植物生理學相關的名詞 (10%)：
 - a. chromophore 與 apoprotein
 - b. senescence 與 vivipary
 - c. DELLA 與 PIN
 - d. expansin 與 extensin
 - e. vernalization 與 ubiquitination
2. 試敘述植物荷爾蒙 abscisic acid(ABA)之生合成路徑。(7%)
3. 請敘述植物荷爾蒙 brassinosteroid(BR)之訊息傳導路徑。(7%)
4. 請比較光敏素及向光素之結構及生理功能。(6%)
5. 請敘述光敏素及隱色素控制植物開花之訊息傳導路徑。(7%)
6. 試以燕麥芽鞘實驗解釋植物荷爾蒙生長素參與向光性之調控。(7%)
7. 請敘述植物初生細胞壁之組成。(6%)

試題隨卷繳回