問答題：

1. Compare the advantages and disadvantages of asexual and sexual reproduction in plants. (10%)

2. Describe how *Agrobacterium tumefaciens* "is a natural genetic engineer." (12%)

3. Discuss some of the evolutionary adaptations of fruits and seeds to dispersal by animals. (10%)

4. Discuss the risks and benefits of introducing genes into crop plants. (8%)

5. For an in-class debate, your professor asks you to select one of the four following environmental factors as the one that is the most critical to seed development. In preparation for that debate, provide a 2- or 3-sentence argument as to why each factor is important. (8%)
   A. Light
   B. Oxygen
   C. Water
   D. Temperature

6. Discuss some of the features that distinguish mesophytes, xerophytes, and hydrophytes. (6%)

7. Describe the effects of applied ethylene on (a) fruit ripening, (b) abscission, and (c) sex expression in cucurbits. (12%)

8. What is the evidence for the existence of florigen and the manner in which it is transported in plants? (10%)

9. Describe the pathway by which the nitrogen in nitrate is assimilated into organic compounds. What differences are observed in plants growing in ecosystems where nitrogen is limiting? (12%)

10. Discuss the relationship between phytoremediation and hyperaccumulation. (6%)

11. Describe the main events occurring in photorespiration. Under what conditions is photorespiration enhanced? (6%)

試題隨卷繳回