

系所組別： 生命科學系丙組

考試科目： 生態學

考試日期：0220 · 節次：2

※ 考生請注意：本試題 可 不可 使用計算機

## I. Short answer questions (25%)

## 1. Define the following terms (2% each)

- (1) Biodegradable
- (2) Biosphere
- (3) Limiting factor
- (4) Niche
- (5) Restoration ecology

## 2. Define “phytoremediation” with examples, and discuss its effects. (5%)

## 3. List 5 major differences between freshwater and saltwater ecosystems. (5%)

## 4. What are in-situ conservation and ex-situ conservation? (5%)

## II. Essay questions (50%, 25% each)

1. Choose one species of vertebrates (i.e., mammals, birds, reptiles, amphibians, and fish) in Taiwan, and use all information that you know about its mating system, ecology (e.g., food habits, habitat use), sociality, nesting site requirements and so on, to construct and discuss a hypothesis about “parental care” behavior in this species (Note: the important thing about a hypothesis is its logics, not whether it is really true or false). (25%)

2. Describe an exotic species showing range expansion since its discovery in Taiwan. Discuss the possible factors that are responsible for its expansion in Taiwan and provide explanations (hypotheses) for how the factors may facilitate the expansion. (25%)

## III. 請回答以下有關溼地生態系的問題 (25%)

1. 敘述河口濕地生物特性 (6%)
2. 敘述濕地植物的類型 (6%)
3. 敘述濕地食物網的組成 (6%)
4. 敘述濕地生物在物質傳輸角色 (7%)