

一、名詞解釋（一題五分）

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|--------------------------|--------------------|
| 1. Home range,           | 2. Gaia hypothesis |
| 3. Cohort,               | 4. Alpha diversity |
| 5. Scavenger,            | 6. Iteroparity     |
| 7. Obligate symbiosis,   | 8. Eutrophication  |
| 9. Basal metabolic rate, | 10. Dioecy         |

二、問答題（一題十分）

1. What is an optimal foraging strategy? What is an optimal diet?
2. Contrast directional, stabilizing, and disruptive selection.
3. How do the first and second laws of thermodynamics relate to ecology?
4. To control a *r*-selected pest, which is more effective by reducing reproduction or by increasing mortality? Discuss the ecological reasons of your answer.
5. To preserve biodiversity, how much do we need to understand about the factors that control biodiversity? Sketch the outlines of a management plan for preserving biodiversity in a large national park in a tropical rain forest.

試題隨卷繳回