

一、請以森林角度出發，解釋下列有關全球碳、氮循環的相關名詞 (20%):

- (1) Nitrogen deposition
- (2) Land use change
- (3) Carbon stock
- (4) Carbon sequestration
- (5) Deforestation

二、1. What are the sun and shade leaves?

2. What are the short-wave and long-wave radiation?

3. How do the environmental factors affect on forest production?

What kind of forest might have larger production?  
(20%)

三、Please draw a simple figure for the trends of Gross Primary Productivity (GPP), Autotrophic Respiration (RA), Net Primary Productivity (NPP), and Net Ecosystem Productivity (NEP) during the course of a typical stand development, and explain why such trends (20%)

四、Please compare the differences in reproductive and light adaption strategies between the early- and late-successional species (10%)

五、請解釋下列各名詞或概念 (30%)

1. Allelopathy
2. Alpha diversity ( $\alpha$  diversity)
3. Riparian zone
4. Biome
5. Carrying capacity
6. Ecotone (生態推移帶)
7. K-strategist (K 策略者)
8. Landscape dynamics
9. Mycorrhiza
10. Seed rain

試題隨卷繳回