一. 靜釋名詞 (16%)
1. temperature inversion
2. synergistic interaction
3. bioconcentration
4. eutrophication

二. 問答題 (84%)
1. Material resources can be classified as three major types, including (1) perpetual (2) renewable resources and (3) nonrenewable. What are perpetual, renewable and nonrenewable resources? Please explain them and take examples. (12%)

2. What is biodiversity and why is it important? (10%)

3. (1) How is nitrogen cycled in the biosphere? It includes nitrogen fixation, nitrification, assimilation, ammonification and denitrification. Please explain them in detail. (15%)
   (2) How are human activities affecting the nitrogen cycle? Please cite one example. (5%)

4. In natural condition, rain is not neutral. What is the pH value of the natural rainfall? Why? (10%)

5. What is greenhouse effect? And what are greenhouse gases? (10%)

6. “Green revolution” increases the global food production. What is green revolution? And what steps does the process involve? (10%)

7. “Solar-hydrogen” has the potential to replace gasoline as future source of energy. Please explain what is solar-hydrogen energy source? And what are its advantages? (12%)