

1. List at least five kinds of plants that are toxic to human and explain their possible mechanisms. (10%)
2. List at least five kinds of microorganisms that are useful to human and explain their possible mechanisms (10%).
3. Define the following terms:
 - (A) Phytochrome (5%)
 - (B) Ozone (5%)
 - (C) Autoimmunity (5%)
4. Describe in detail about the mechanisms of bioactive substances (hormones and/or neurotransmitters) that can produce bioactivities at low concentrations. (15%)
5. Describe the replication cycle (life cycle) of retroviruses. (10%)
6. What are the functions of cytoskeleton and endoplasmic reticulum? (10%)
7. Outline all you know about the applications of recombinant DNA technology to:
 - (A) the human genome project (3%)
 - (B) medicine (4%)
 - (C) agriculture (3%)
8. List all types of mutations, and describe their mechanisms. (10%)
9. What is the meaning of C₃ plants? C₄ plants? How do they differ? (10%)