Assignment 2

1. a) Why is the use of genetically modified organisms (GMOs) controversial? Discuss.
b) Discuss the potential health benefits of consuming genetically modified crops.
c) What are some of the ethical concerns associated with GMOs?

2. a) What is the difference between a primary producer and a secondary producer in an ecosystem?
b) Explain how energy is transferred from one trophic level to another in a food chain.
c) Describe the role of decomposers in recycling nutrients back into the environment.

3. a) Define the term biodiversity and explain its importance.
b) Discuss the different ways in which human activities are contributing to the loss of biodiversity.
c) What measures can be taken to conserve biodiversity?

4. a) What are the different types of weather that can be found in a tropical rainforest?
b) Describe the annual cycle of precipitation in a tropical rainforest.
c) Explain how the unique climate of a tropical rainforest affects its biota.

5. a) List three important characteristics of a healthy ecosystem.
b) Explain how the balance of energy and matter is maintained in an ecosystem.
c) Discuss the role of ecosystem services in human livelihoods.

6. a) What is the role of microorganisms in the nitrogen cycle?
b) Describe the process of nitrogen fixation in biological systems.
c) Explain the importance of the nitrogen cycle to plant growth.

7. a) Define the term niche and explain its significance in ecology.
b) Discuss the importance of understanding species niches in conservation efforts.
c) How do niche theory and community structure influence human activities?

8. a) What is the difference between a community and a population?
b) Explain how species interact within a community.
c) Discuss the factors that influence species interactions in a community.