2580002

THE UNIVERSITY of York

Degree Examination 2005

ENVIRONMENT DEPARTMENT

MSc in Environmental Economics
MSc in Environmental Economics and Environmental Management

POPULATION AND COMMUNITY ECOLOGY FOR ENVIRONMENTAL MANAGEMENT

Time allowed: **two hours**

Answer **ANY TWO** questions out of **FOUR**
All questions are equally weighted

Pay adequate attention to spelling, punctuation and grammar, so that your answers can be readily understood

1. Food webs are extremely complex networks of interactions between species, and it is often hard to see patterns within such complex data sets. Give a critical account of the ways in which early and more recent food web ecologists have attempted to reduce this complexity so that patterns may be more easily appreciated.

2. In at least some communities, there are certain species termed "keystones" which play an important role in organising the community and maintaining community stability. Using examples from the literature, (1) show how keystones can be identified in nature and (2) critically discuss how the keystone concept has been used by conservation biologists and managers.

3. Inter-specific competition is thought by many ecologists to be a major organising force in natural systems. With reference to named examples from the literature, give an account of how inter-specific competition can be best demonstrated and discuss the evidence that competition is prevalent in nature.

4. What are the main types of consumer-resource interactions between species in nature and what are the biological and ecological consequences in each case for the participants, especially the resource species?