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THE UNIVERSITY *of York*

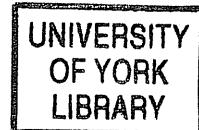
Degree Examinations 2005

ENVIRONMENT DEPARTMENT

**BSc in Environmental Science, Part 1a
BSc in Environment, Economics and Ecology, Part 1a**

ECOLOGY FOR ENVIRONMENTAL SCIENTISTS 1

Time allowed: **one and a half hours**



Answer four questions only

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

1. How do the structure and function of DNA and the processes occurring during meiosis generate genetic variation between individuals in a population?
2. Describe the logistic model of population growth and the evidence that natural populations of animals or plants display such growth.
3. What is the “ecological niche” of a species?
4. What evidence would you need to convincingly demonstrate inter-specific competition in nature? Illustrate your answer using examples from nature.
5. Describe the main classes of interactions between species in ecological systems and the consequences for the different participants involved. Provide examples from the real world.
6. How might foraging animals maximise their energy intake and how is this affected by risk of predation?
7. What is meta-population ecology and how can this concept be used to help us to better conserve species in nature?