2580001

THE UNIVERSITY of York

Degree Examination 2005

ENVIRONMENT DEPARTMENT

MSc in Environmental Economics
MSc in Environmental Economics and Environmental Management
MRes in Ecology and Environmental Management

POLLUTION EFFECTS ON SOIL/PLANT/WATER ECOSYSTEMS

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. Answer both part a and part b.

(a).What evidence is there to show that acid rain has adversely influenced the chemical, biological and physical properties of peat soils? (60%)

(b).Explain how this evidence has been used to set critical loads of acidity for peats in the UK. (40%)

2. Answer both part a and part b.

(a).Emissions of fixed nitrogen to the atmosphere have increased greatly over the last 100 years. Describe the main reasons for this large increase in emissions of fixed nitrogen. (30%)

(b).Discuss the evidence that increased deposition of nitrogen from the atmosphere has caused changes in plant species composition in the United Kingdom. Your answer should identify the different types of evidence that are available and the mechanisms by which increased nitrogen deposition can affect plant species. (70%)

3. Answer both part a and part b

(a) How and why does water chemical quality change during storm and/or snow melt events in upland rivers in Britain?(50%)

(b) How would these changes be measured in practice in northern British upland catchments? What difficulties might be encountered when making such measurements routinely throughout the year? (50%)

4. Describe how the ASH and G-BASH models may be used for the prediction of calcium concentration and gran alkalinity of stream waters using only readily available data.