ENVIRONMENT DEPARTMENT

Degree Examination 2007

Protected areas: design, implementation and management (MSc MEM, MRes, MSc ES, MSc EEEM)

SITS code: 2580061

Answer any two questions.

Time allowed 2 hours.

1. Discuss some of the factors you would take into account in designing a new protected area. You can choose to discuss either a marine or terrestrial protected area.

Answers are expected to include considerations relating to size, shape and location in particular. Students may discuss biological and socio-economic considerations in determining the configuration of their protected area.

2. Discuss some of the reasons why protected areas may fail to achieve their conservation objectives.

Answers are expected to include discussion of lack of management plans, inadequate protection, paper parks, lack of funding, lack of community engagement and support.

3. Why is connectivity – that is, the movement or dispersal of animals, plants and their propagules – important to sustaining biodiversity in protected areas?

This question should elicit answers that may include discussions of metapopulation dynamics, the rescue effect, habitat fragmentation, corridors, transport of propagules on ocean currents, animal migrations, and climate change.

4. Discuss the role of networks of protected areas to sustaining biodiversity. In your opinion, are they sufficient to maintain biodiversity on this planet? Explain the reasoning behind your answer.

Answers are expected to include discussion of how much area protected area networks cover at present and are likely to cover in the future, and the relation of this to inclusion of the full spectrum of biodiversity. They will also include discussion of the likelihood of protected areas to be able to sustain biodiversity when surrounded by impoverished land and seascapes, and the need for transfer of propagules between protected areas to maintain biodiversity within them. This should lead on to discussion of the role of the habitat matrix between protected areas in maintaining biodiversity.