



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR
OF SCIENCE COASTAL AND MARINE RESOURCES
MANAGEMENT

SMR 206: RESOURCES ASSESSMENT AND TOOLS

DATE: Friday, 30th March, 2012

TIME: 8.00 a.m. – 10.00 a.m.

INSTRUCTIONS:

Answer **ALL** questions in Section A and any **ONE** question in Section B within a section all questions carry equal marks. Illustrate your answers with diagrams and give examples whenever appropriate.

Section A (40 marks)

1. Describe briefly a method that an ecologist can use to monitor the frequency, cover and density of a herbaceous plant species in a grassland ecosystem.
2. Outline three direct and two indirect methods that can be used to monitor populations of wild mammal species in a forest environment. Give appropriate examples in each case.
3. Outline the key steps followed while setting up an ecological monitoring program for an endangered animal species in a conservation area.
4. State five activities by which man negatively impacts on aquatic ecosystems.

5.
 - a) Discuss three man's activities that accelerate the rate of soil erosion.
 - b) State two methods that may be used to monitor soil erosion in a semi arid environment.
6.
 - a) Explain the terminology Remote sensing as used in Geographical Information System.
 - b) Using examples, state three applications of GIS and/or remote sensing in ecological monitoring.
7.
 - a) Outline and state examples of three types of environmental hazards common in urban environment.
 - b) Describe briefly a method that can be used to monitor one of the environmental hazards in 7 (a) above.
8. Explain the limitations associated with the use of interviews as a method for valuing natural resources.

Section B:

Answer any question.

9.
 - a) Discuss the causes global warming and its effects in marine ecosystems.
 - b) Discuss five methods that may be used to mitigate the impacts of climate change.
10.
 - a) Discuss reasons why Environmental Impact Assessments is carried out before a development project is implemented.
 - b) Discuss the protocol used in carrying out an Environmental Impact Assessment of a project of your choice.
11.
 - a) Discuss the assumptions considered in line transect sampling when used to determine the density of wild animals in a selected ecosystem.
 - b) Design a data sheet that may be used in monitoring the population of an animal species using line transect sampling method.
 - c) Discuss the advantages of using line transect method.