



MACHAKOS UNIVERSITY

University Examinations for 2016/2017

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL STUDIES

**SECOND YEAR SECOND SEMESTER EXAMINATION FOR BACHELOR OF
SCIENCE IN ENVIRONMENTAL STUDIES (ENVIRONMENTAL RESOURCE
CONSERVATION)**

ENS 246: FOREST RESOURCES CONSERVATION AND MANAGEMENT

Date:

Time:

INSTRUCTIONS:

Answer Question One and Any Other Two Questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- (a) Explain the following terms as used in forest resources conservation and management.
- (i) Anthropocene (2 marks)
 - (ii) Forest degradation (2 marks)
 - (iii) Hardin's "Tragedy of the Commons Theory". (2 marks)
 - (iv) Global Forest Carbon Mechanism (2 marks)
 - (iv) Timber Stand Improvement (2 marks)
- (b) Explain how high tree planting density may affect carbon storage (5 marks)

- (c) Using examples, explain five benefits of using exotic tree species in Kenya. (5 marks)
- (d) Explain five Cultural values forests in Kenya (5 marks)
- (e) Illustrate five common elements of forest structure (5 marks)

QUESTION TWO (20 MARKS)

- (a) Explain five Causes of Forest Degradation in Kenya (10 marks)
- (b) Discuss five effects of forest degradation on the environment in Kenya. (10 marks)

QUESTION THREE (20 MARKS)

- (a) Citing examples, discuss eight important functions of forest ecosystems in Kenya. (16 marks)
- (b) With reference to both terrestrial and marine environments, discuss the effectiveness of ecotourism as a tool for conservation. (4 marks)

QUESTION FOUR (20 MARKS)

- (a) Explain five natural resource conflicts management and suggest possible resolution strategies. (10 marks)
- (b) Explain how you can carry out evaluation of forest functions in a named ecosystem. (10 marks)

QUESTION FIVE (20 MARKS)

Citing examples, explain 10 ways in which natural regeneration is important in tropical forest ecosystems. (20 marks)