



MACHAKOS UNIVERSITY

University Examinations for 2017/2018

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL STUDIES AND COMMUNITY
DEVELOPMENT

THIRD YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF
ENVIRONMENTAL STUDIES (ENVIRONMENTAL RESOURCES CONSERVATION)

ERC 309: URBAN FORESTRY

DATE: 13/12/2017

TIME: 11.00-1.00 PM

INSTRUCTIONS:

Answer Question One and Any Other Two questions

1. a) Define the following terms:
 - i. Urban forestry (1 mark)
 - ii. Silviculture (1 mark)
 - iii. Tree ordinances (1 mark)
 - iv. Silvicultural systems (1 mark)
 - v. Direct seeding (1 mark)
- b) Explain how urban forests differ from convectional forests in term of the following attributes
 - i. Structure (4 marks)
 - ii. Dynamics and driving forces (4 marks)
- c) Explain the ecological values of urban forestry (5 marks)
- d)
 - i Mr. Otieno established an arboretum in Machakos town. Explain why it is important for him to undertake quality control after planting (5 marks)
 - ii Explain why you would discourage Mr. Otieno from planting tree species in the arboretum that will require application of pesticides (4 marks)
- e) Outline THREE threats to urban forestry (3 marks)

2. a) Explain the importance of choosing the right design at the planning stages of urban forestry (10 marks)
 b) Discuss TWO tree crown shapes you can select for urban forestry (10 marks)
3. You have been contracted by the County Government of Nairobi to create a bird sanctuary within the city. With the aid of illustrations, explain how you will apply your knowledge in silviculture to achieve the County's objective (20 marks)
4. a) Explain the role of open spaces in Urban areas (10 marks)
 b) Discuss the guidelines to be considered in planning an open space (10 marks)
5. Discuss tree ordinances related to planting and removal of street trees in an urban environment (20 marks)