



MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

THIRD YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR
BACHELOR OF ENVIRONMENTAL RESOURCE CONSERVATION

ERC 304: AGROFORESTRY SYSTEM AND PRACTICES

DATE: 24/7/2019

TIME: 2.00-4.00 PM

INSTRUCTIONS:

Answer question ONE and any other TWO questions

Use illustrations where necessary.

QUESTION ONE (COMPULSORY – 30 MARKS)

- a) Distinguish between
 - i. Taungya and Alley cropping (2 marks)
 - ii. Grazers and browsers (2 marks)
 - iii. Agro-forestry system and agro-forestry practice (2 marks)
 - iv. Silvi-pastoral system and sericulture system (2 marks)
 - v. Social forestry and community forestry (2 marks)
- b) State three objectives of Agro-forestry (3 marks)
- c) State the characteristics of agro-forestry (3 marks)
- d) Explain how you determine the attributes of Multi-purpose tree(MPT) in production and service functions (4 marks)
- e) Explain the role of agro-forestry in land and water management (10 marks)

QUESTION TWO (20 MARKS)

- a) Describe how agro-forestry help to conserve biodiversity (10 marks)
- b) Highlight the origin of agro-forestry (10 marks)

QUESTION THREE (20 MARKS)

You have been posted in Machakos County as an environmental conservation officer. Explain the agro-forestry technologies you could recommend to the farmers(20 marks)

QUESTION FOUR (20 MARKS)

- a) Explain the concept diagnosis and design (D&D) methodology in agro forestry. (2 marks)
- b) Highlight the six main steps in diagnosis and design methodology in agro forestry.
(6 marks)
- c) Discuss the principles/ consideration of agro forestry project design. (12 marks)

QUESTION FIVE (20 MARKS)

Using practical examples, explain the differences and relationship between agro-forestry system and agro-forestry practice