



# **MACHAKOS UNIVERSITY**

**University Examinations For 2021/2022 Academic Year**

**SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT**

**DEPARTMENT OF ENVIRONMENTAL SCIENCES**

**THIRD YEAR SECOND SEMESTER EXAMINATION FOR**

**BACHELOR OF ENVIRONMENTAL STUDIES (ENVIRONMENTAL RESOURCE**

**CONSERVATION)**

**ERC 304: AGROFORESTRY SYSTEMS AND PRACTICES**

**DATE: 14/12/2021**

**TIME: 11:00 – 1:00 PM**

---

**INSTRUCTIONS: Answer question ONE and TWO other questions**

**QUESTION ONE (COMPULSORY) (30 MARKS)**

- a) Explain the criteria used for defining agroforestry. (6 marks)
- b) Describe three attributes which all agroforestry systems possess. (6 marks)
- c) Explain why tree-growing has gained support among farmers overtime. (6 marks)
- d) Describe the characteristics of agroforestry trees and shrubs. (6 marks)
- e) Outline the limitations linked with agroforestry practices. (6 marks)

**QUESTION TWO (20 MARKS)**

Giving examples of two (2) Agrosilvopastoral system practices, discuss the following for each:

- a) A description of the arrangement and interaction of the components (10 marks)
- b) Criteria used for its classification (10 marks)

**QUESTION THREE (20 MARKS)**

Discuss the concept and procedures of diagnosis and design (D & D) in evaluating agroforestry systems

**QUESTION FOUR (20 MARKS)**

Discuss critically the effects of trees on soils.

**QUESTION FIVE (20 MARKS)**

Discuss the socio-economic and cultural considerations that influence farmers' perception to tree planting in Kenya.