



MACHAKOS UNIVERSITY

University Examinations For 2018/2019 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

THIRD YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF ENVIRONMENTAL RESOURCE CONSERVATION

ERC 304: AGROFORESTRY SYSTEMS AND PRACTICES

DATE: 25/4/2019

TIME: 8:30 – 10:30 AM

INSTRUCTIONS: Answer question ONE and TWO other questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Explain the following terms (2 marks)
 - i) Alley cropping (2 marks)
 - ii) Agro-forestry (2 marks)
 - iii) Coppicing (2 marks)
 - iv) Allelopathy (2 marks)
 - v) Pollarding (2 marks)
- b) State three effects of tree-crop interactions in agro-forestry (3 marks)
- c) Highlight three attributes of agro-forestry systems. (3 marks)
- d) Using example, describe “IDIOTYPE” for an agro-forestry system (4 marks)
- e) Discuss the principle benefits and costs of agro-forestry (10 marks)

QUESTION TWO (20 MARKS)

- a) Explain the significance of agro-forestry in biodiversity conservation (10 marks)
- b) Discuss the role of agro-forestry in land and water management. (10 marks)

QUESTION THREE (20 MARKS)

As an environmental officer working in Machakos County, explain to farmers the agro-forestry technologies you would recommend to farmers.

QUESTION FOUR (20 MARKS)

- a) Describe the sequence of steps for designing and successful introduction of agro-forestry Technologies. (10 marks)
- b) Discuss the challenges faced by small scale agro-forestry farmers in East Africa. (10 marks)

QUESTION FIVE (20 MARKS)

Discuss the role of agro-forestry in the rehabilitation of degraded lands