
CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN

AGRI 401: DRYLAND FARMING

STREAMS:

TIME: 2 HOURS

DAY/DATE: THURSDAY 06/12/2018

2.30 P.M – 4.30 P.M

INSTRUCTIONS

- **Answer all questions in section I and any two in section II**

SECTION I: ANSWER ALL QUESTIONS

1. (a) Advise the farmers in dryland farming conditions on how conservation tillage can increase agricultural productivity in their farmers. [6 marks]
(b) Describe areas in which biotechnology can be utilized to towards development of crop in response to environmental stresses and climate change. [4 marks]
2. Describe the factors which must be efficiently integrated to enhancing sustainable high-yielding crop production under dry land farming conditions. [5 marks]
3. (a) What is sustainable agricultural system? [6 marks]
4. (a) As an agricultural expert what advice would you give to your county government to focus while developing a dryland improvement policy. [6 marks]
(b) In your opinion, how can farmers achieve crop diversification. [3 marks]

SECTION II (40 MARKS)

5. (a) Describe the impact of climate change in dryland production systems. [10 marks]
(b) Elaborate on why crop rotation may not be feasible in agricultural production systems. [6 marks]
(c) In your opinion is it feasible to advice farmers in dryland farming conditions to adopt use of micro-irrigation. [4 marks]

6. (a) Describe the farming systems that are suitable for adoption for dryland production to improve crop survival. [12 marks]
- (b) Discuss the reasons for low highly variable and uncertain yields of crops under dryland farming conditions. [8 marks]
7. (a) Crop in dryland farming are characterized by very low and highly variable and uncertain yields. Discuss why crop failures occur in such areas. [12 marks]
- (b) About 99 per cent of the water absorbed by the plants is lost in transpiration. Explain how farmers can reduce transpiration using antitranspirants. [8 marks]
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