



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2008/2009
INSTITUTE OF OPEN LEARNING
EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE

SBT 407: ARID LAND ECOLOGY

DATE: FRIDAY 19TH FEBRUARY 2010 TIME: 11.00 A.M. – 1.00 P.M.

INSTRUCTIONS

Answer ALL Questions in Section A and any ONE question in Section B.

Answers to Section A should be concise and should be written in the spaces provided below each question.

SECTION A:

Short answer Question (5 marks each)

1. Define or explain:

a) Black cotton soil

b) Field capacity

c) Transhumance

d) *Admsonia digitata*

e) Stocking density

2. List five basis for classifying irrigation water.

3. a) Discuss two causes of salinization of a soil profile.

- b) Name two ways of reducing salinity in ASAL soils.
4. Discuss the three challenges faced by a forester in natural regeneration of trees in arid environment.
5. a) List three causes of aridity.
- b) Discuss aridity as a factor in the vicious cycle of poverty for subsistence cultivators.

6. Differentiate between C₃ and C₄ plants.

7. What is agropastoralism and how does it benefit inhabitants of ASAL?

8. What is the negative impact of grazers, browsers, and man on arid land natural vegetation?

SECTION B: Write one essay on any one of the following (30 marks)

1. Adaptation of plants in arid environments.
2. Need for irrigation in ASAL.
3. Rehabilitation of degraded arid lands.