

NATIONAL UNIVERSITY OF LESOTHO

FACULTY OF AGRICULTURE

B.Sc. AGRICULTURE EXAMINATION

CPS: 4510 Irrigation Agronomy

JUNE 2023

MARKS: 100

TIME: 3HRS

INSTRUCTIONS: ANSWER ALL THE QUESTIONS

QUESTION 1 [20 marks]

- (a) With an aid of a diagram explain variation in crop coefficient(k) with growth stages, (10)
- (b) Mention the stages at which water becomes critical in maize, sorghum, wheat, beans and potatoes, (10)

QUESTION 2 [30 marks]

Explain briefly the following;

- a) factors to be considered for installing drainage system, (10)
- b) classification of soil moisture availability and forces holding water, (10)
- c) different types of consumptive use, (5)
- d) types of drainage systems (5)

QUESTION 3 [20 marks]

Explain methods are used for the following;

- a) determining irrigation scheduling (10)
- b) assessing irrigation efficiency (10)

QUESTION 4 [30 marks]

Write an essay on the following irrigation systems;

- a) surface irrigation system (10)
- b) sprinkler irrigation (10)
- c) micro-irrigation (10)

Good luck