



WI-2-60-1-6

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

UNIVERSITY EXAMINATIONS 2017/2018

**THIRD YEAR FIRST SEMESTER EXAMINATIONS FOR THE DEGREE OF
BACHELOR OF SCIENCE IN LAND RESOURCES PLANNING AND
MANAGEMENT.**

ALP 2311 IRRIGATION SYSTEM PLANNING DESIGN AND MANAGEMENT

DATE: AUGUST, 2018

TIME: 2 HOURS

INSTRUCTIONS:

This paper has four questions

Answer question 1 (40 Mks) and any other two questions (30 Mks each)

Follow the instructions on your examination answer booklet

Question 1. Compulsory (40 Mks)

- a) State five factors to be considered in feasibility planning of an irrigation project. (10 Mks)
- b) Explain why Soil Moisture is an important factor in determining an irrigation method. (15 Mks)
- c) Briefly describe how furrow irrigation method is practised (15 Mks)

Question 2. Optional (20 Mks)

- (a) State the importance of irrigation practice in Kenya in the "Vision 2030" land use planning. (10 Mks)
- (b) Discuss the potential of irrigation Planning and practice in Kenya (20 Mks)

Question 3. Optional (20 Mks)

- a) With help of diagram describe how tensiometers are applied in short term irrigation planning (15 Mks)
- b) Outline the advantages of tensiometers application in irrigation planning. (5 Mks)
- c) List five other techniques that can be applied in soil moisture monitoring in irrigation scheduling. (5Mks)

Question 4. Optional (20 Mks)

- a) Explain why is overhead irrigation widely applied in irrigation Practice (20 Mks)
- b) State why sprinkler irrigation is not sometimes preferred in land use planning (10Mks)