

**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2020/2021**

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

**ALP 2311: IRRIGATION SYSTEMS PLANNING DESIGN AND MANAGEMENT**

**DATE: AUGUST 2021 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE (COMPULSORY) AND ANY**

**TWO QUESTIONS**

**QUESTION ONE: 40 MARKS**

a. Briefly outline what irrigation planning processes entails. (20 marks)

b. Describe the objectives of effective irrigation planning. (20 marks)

**QUESTION TWO: 30 MAKRS**

a. Distinguish between “sprinkler irrigation and drip irrigation”. (10 marks)

b. Describe two types of classification of overhead irrigation stating two examples in each case system. (20 marks)

**QUESTION THREE: 30 MARKS**

Irrigation practice is import in land use planning in Kenya. Discuss. (30 marks)

**QUESTION FOUR: 30 MARKS**

a. Define the term “soil moisture tension”. (5 marks)

b. With the help of illustration describe a typical soil moisture extraction pattern. (15 marks)

c. How can such moisture extraction pattern be used in design of irrigation scheduling? (10 marks)