

# **NATIONAL UNIVERSITY OF LESOTHO**

**FACULTY OF AGRICULTURE**

**B.Sc. AGRICULTURE EXAMINATION**

**CPS 2502 – INTRODUCTION TO IRRIGATION AND DRAINAGE**

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**January 2024**

**MARKS: 100**

**Time: 3 hours**

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**INSTRUCTIONS:**      **Answer all questions.**

**Number your answers correctly.**

### **QUESTION 1**

- a). Define irrigation.
- b). What are the advantages and disadvantages of irrigation.

**(10)**

### **QUESTION 2**

Describe the concepts of Available Water (AW) and Readily Available Water (RAW) and demonstrate how these affect the yields of crops.

**(10)**

### **QUESTION 3**

Name the area where you come from (District and village) and mention the existing sources of irrigation water available there, describing in full what each source is. Further, describe five (5) possible water quality issues that may affect the water that is in your area, and explain how they can be treated.

**(20)**

### **QUESTION 4**

Using a diagram explain what a hydrologic cycle is and provide all the components of the cycle.

**(10)**

### **QUESTION 5**

Discuss the Plant-Soil-Atmosphere relationships and provide equations where relevant.

**(20)**

### **QUESTION 6**

Name and explain five (5) problems of irrigation in Lesotho

**(10)**

**QUESTION 7**

Name and explain four (4) types of irrigation used worldwide, outlining advantages and disadvantages of each type.

**(20)**