

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**FOURTH YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR
OF SCIENCE IN NATURAL RESOURCE MANAGEMENT**

NARE 457: DRYLANDS REHABILITATION

STREAMS: BSC (NARE) Y4S2

TIME: 2 HOURS

DAY/DATE: TUESDAY 11/04/2023

2.30 P.M. – 4.30 P.M.

INSTRUCTIONS: Answer question ONE and any other THREE

SECTION A: 30 MARKS

- Q1. Briefly describe the importance of drylands to economic development in Kenya. [6 marks]
- Q2. Briefly describe the two commonly used classification system of drylands. [4 marks]
- Q3. Write short notes on the following technologies used in the drylands rehabilitation
- (a) In-situ water harvesting [2 marks]
 - (b) Conservation agriculture [2 marks]
 - (c) Retention ditches [2 marks]
- Q4. Briefly describe the characteristics of three soil systems of the drylands and how they limit biomass production. [6 marks]
- Q5. How would you identify the following land degradation processes in a landscape
- (a) Soil salinization [2 marks]
 - (b) Soil Solidification [2 marks]
- Q6. Briefly describe the climate characteristics of the drylands [4 marks]

SECTION B (40 MARKS)

- Q7. Discuss the contribution of land use and climate change induced risks on land degradation processes in the drylands. [20 marks]
- Q8. Discuss four climate smart technologies applicable to build resilience of the drylands to increase food production. [20 marks]
- Q9. Discuss the role of community participation in the rehabilitation of drylands. [20 marks]
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