



UNIVERSITY OF EMBU

2019/ 2020 ACADEMIC YEAR

SECOND SEMESTER EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN
LAND AND WATER MANAGEMENT**

ALM 604: NUTRIENT CYCLING, MODELING AND MANAGEMENT

DATE: OCTOBER 29, 2020

TIME: 2.00 – 5.00PM

INSTRUCTIONS:

Answer ANY FOUR Questions.

QUESTION ONE (25 MARKS)

Describe the various nutrient inputs to agro-ecosystems (25 marks)

QUESTION TWO (25 MARKS)

Design scenarios to predict the components of Nitrogen Cycles in various agro-ecosystems (25 marks)

QUESTION THREE (25 MARKS)

What would happen to the nutrients if the population of organisms increased or decreased in soils of a given ecosystem? (25 marks)

QUESTION FOUR (25 MARKS)

Describe the type of data required and method of quantification of the input and output processes used in the calculation of N, P and K flows and balances under NUTMON (25 marks)



QUESTION FIVE (25 MARKS)

Explain the policy implications of Energy, Family Farm and Economic Regulations on nutrient management in agro-ecosystems (25 marks)

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