(*Knowledge for Development*)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2020/2021 ACADEMIC YEAR

FOURTH YEAR SPECIAL/SUPPLEMENTARY EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE AND BIOTECHNOLOGY

COURSE CODE: SAB 411
COURSE TITLE: AGRICULTURAL SYSTEM NUTRIENT MANAGEMENT
DATE: 14TH JANUARY 2022 **TIME: 11 – 1 PM**

INSTRUCTIONS TO CANDIDATES

Answer question ONE and any other Two.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over

Q1. a) Define the term 'carrying capacity' as used in environment studies (2 marks)

b) Differentiate between ecosystem and biodiversity. (2 marks)

c) Explain the term 'best management practice' as used in agriculture. (2 marks)

d) Differentiate between integrated farming system and specialized farming system. (2 marks)

e) Differentiate between time controlled grazing and high-intensity low-frequency grazing approaches. (2 marks)

f) Explain why precision agriculture is considered an ideal way to manage crop enterprises. (4 marks)

f) Discuss the nutrients dynamics in soils and plant systems. (6 marks)

g) Discuss reasons why appropriate balance between economic gains and environment sustainability should be the priority consideration when adopting farming systems. (10 marks)

Q2. Discuss the five ways in which nutrients flow into and out of farms. (20 marks)

Q3. Elaborate Kenya's Ministry of Agriculture recommendations with respect to nutrient management on farms. (20 marks)

Q4. Discuss how the practice of agro-forestry is one of the viable ways to achieving sustainable development. (20 marks)

Q5. Discuss the strengths and weaknesses of the conventional cash crop farming systems in Kenya. (20 marks)