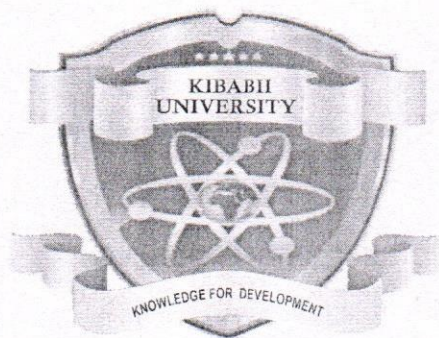


20



(Knowledge for Development)

KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2016/2017 ACADEMIC YEAR

SECOND YEAR 1ST SEMESTER
SPECIAL/SUPPLEMENTARY EXAMINATIONS

**FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE AND
BIOTECHNOLOGY & BACHELOR OF SCIENCE AGRICULTURE
ECONOMICS AND RESOURCE MANAGEMENT**

COURSE CODE: SAB 211
COURSE TITLE: AGROGEOLOGY

DATE: 19TH SEPT. 2017

TIME: 8 AM – 10 AM

INSTRUCTIONS TO CANDIDATES

Answer all Questions in section A and any other two (2) questions in section B.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

SECTION A = 30 MARKS (Compulsory)

1. a) State the role of process engineer in agrogeology field (4 Marks)
- b) Identify the main limiting nutrients of sub Saharan Africa (1 Mark)
- c) Briefly explain the purpose of rocks and minerals in crop production (6 Marks)
- d) State the form of phosphorus that is common in phosphate rocks (1 Mark)
- e) Describe how liming affects the phosphate rock dissolution (6 Marks)
- f) State the various sources of guano in Kenya (12 Marks)

SECTION B = 40 MARKS (Attempt any two Questions in this section)

2. a) Describe the reactivity of PR (2 Mark)
- b) State three examples of K minerals (6 Marks)
- c) Identify two rock forming minerals that contain the following micronutrients:
 - i) Manganese (2 Marks)
 - ii) Zinc (2 Marks)
 - iii) Copper (2 Marks)
 - iv) Chlorine (2 Marks)
 - v) Boron (2 Marks)
 - vi) Molybdenum (2 Marks)
3. a) Give six examples of high to medium reactive phosphate deposits (6 Marks)
- b) State the function of pyrite as an agromineral (10 Marks)
- c) Briefly explain forms in which zinc occurs as an agromineral (4 Marks)
4. a) Discuss the drawbacks on the direct use of phosphate rocks for direct application on the farm (8 Marks)
- b) Describe the distribution of natural zeolites in Kenya (4 Marks)
- c) Discuss the agronomic potential of agrominerals in Kenya (8 Marks)