



(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017 ACADEMIC YEAR

THIRD YEAR 2ND SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE AND BIOTECHNOLOGY

COURSE CODE: SAB 312
COURSE TITLE: SOIL BIOLOGY AND BIOREMEDIATION

DATE: 22ND SEPT. 2017 **TIME: 11:30 AM – 1:30 PM**

INSTRUCTIONS TO CANDIDATES

Answer Question ONE and any other TWO Questions.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

QUESTION ONE = 30 MARKS (Compulsory)

- a) Define Soil Biology according to the Africa Soil Science Society (2 Marks)
- b) Describe the role of Martinus Beijerinck in the field of Soil Biology (4 Marks)
- c) Differentiate between Plate Count Method and Most Probable Number Method of Soil organisms Quantification (12 Marks)
- d) Describe the classification of bacteria based on Nutrition (12 Marks)

QUESTION TWO = 20 MARKS

- a) Describe the importance of Microbial Ecology (8 Marks)
- b) State and briefly describe any 4 the principles of Molecular methods for studying soil ecology (12 Marks)

QUESTION THREE = 20 MARKS

- a) Define Bioremediation (2 Marks)
- b) Describe essential factors for Microbial Bioremediation (18 Marks)

QUESTION FOUR = 20 MARKS

- Describe various Managed Bioremediation techniques (20 Marks)