**UNIVERSITY OF KABIANGA**

**UNIVERSITY EXAMINATIONS**

**2014/2015 ACADEMIC YEAR**

**SUPPLEMENTARY/SPECIAL EXAMINATION**

**SECOND YEAR SECOND SEMESTER EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN MICROBIOLOGY AND BACHELOR OF SCIENCE IN BIOCHEMISTRY**

**COURSE CODE: MIC 211**

**COURSE TITLE: MICROBIAL ECOLOGY**

**DATE: 26/8/2015**

**TIME: 9.00 A.M- 12.00 NOON**

**INSTRUCTIONS TO CANDIDATES:**

Answer **ALL** Questions in **section A** and any other **THREE** in **section B**.

**SECTION A (28 MARKS)**

1. Define the following terms:

 a. Microbial ecology. (1 mark)

 b. Fundamental niche. (1 mark)

 c. Community. (1 mark)

 d. Biofilm. (1 mark)

2. Describe oxygen and temperature relations in a lake in temperature environment. (6 marks)

3. Briefly explain the deep subsurface as a microbial habitat. (6 marks)

4. Describe the Winogradsky column as a method of assessing microbial diversity in nature. (6 marks)

5. Briefly describe **two** culture independent methods of analyzing microbial communities. (6 marks)

**SECTION B; (42 MARKS)**

6. Discuss the culture dependent methods of assessing microbial diversity. (14 marks)

7. Discuss the effects of environmental factors on microbial growth. (14 marks)

8. Discuss marine environment as a microbial habitat. (14 marks)

9. Discuss methods of assessing microbial activities in nature. (14 marks)