**UNIVERSITY OF KABIANGA**

**UNIVERSITY EXAMINATIONS**

**2017/2018 ACADEMIC YEAR**

**SECOND YEAR FIRST SEMESTER EXAMINATION**

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

**COURSE CODE: MIC 209**

**COURSE TITLE: INTRODUCTION TO BIOSAFETY AND BIOETHICS**

**DATE: 7/2/2018**

**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**

1. Define the following terms:

 a. Stem cells. (1 mark)

 b. Chimera. (1 mark)

 c. Autonomy. (1 mark)

 d. Beneficence. (1 mark)

 e. Bioethics. (1 marks)

2. Differentiate between bioethics and biosecurity. (4 marks)

3. With an example, describe how ethics can apply to research subject customs. (4 marks)

4. Describe the classification of infective microorganisms according to the risk groups. (4 marks)

5. Describe any **four** international rules safeguarding GMOs. (4 marks)

6. Explain what to consider when drawing classification of microorganisms' risk groups. (4 marks)

7. Briefly discuss the agonizing moral dilemmas arising from euthanasia. (3 marks)

**SECTION B (42 MARKS): CHOOSE ANY THREE QUESTIONS**

8. Explain application of ethics in bio- banking and research involving human biological materials. (14 marks)

9. Describe the risks associated with GMOs. (14 marks)

10. Explain the good microbiological techniques. (14 marks)

11. Describe the responsibility of laboratory biosecurity. (14 marks)