**UNIVERSITY OF KABIANGA**

**UNIVERSITY EXAMINATIONS**

**2015/2016 ACADEMIC YEAR**

**THIRD YEAR SECOND SEMESTER EXAMINATION**

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

**COURSE CODE: MIC 313**

**COURSE TITLE: BACTERIOLOGY**

**DATE: 6/4/2016**

**TIME: 2.00 P.M-5.00 P.M**

**INSTRUCTIONS TO CANDIDATES:**

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

**SECTION A; (28 MARKS)**

**Answer all questions.**

1. Describe the basic components of bacterial culture media. (4 marks)

2. What is the generation time if 1000 bacterial cells growing logarithmically for 5 hours produced 3.4 x 10^6 cells? (4 marks)

3. Using an illustration describe the structure of a bacterial spore. (4 marks)

4. Describe the use of catalase, oxidase, indole and unrease tests in identification of bacteria. (4 marks)

5. Distinguish between enriched and selective media giving one example in each case. (4 marks)

6. State any **four** characteristics that distinguish bacterial exotoxins from endotoxins. (4 marks)

7. Outline the various nutritional groups found in bacteria. (4 marks)

**SECTION B; (42 MARKS) Answer any 3 Questions**

8. Discuss the methods used by pathogenic bacteria to evade the host defense mechanism. (14 marks)

9. With illustrations, discuss the bacterial cell wall structure and components showing the differences between the gram positive and the gram negative cell wall. (14 marks)

10. Describe the various chemical methods used in control of microorganisms. (14 marks)

11. Discuss the mode of action of antimicrobial drugs. (14 marks)