**UNIVERSITY OF KABIANGA**

**UNIVERSITY EXAMINATIONS**

**2014/2015 ACADEMIC YEAR**

**SECOND YEAR SECOND SEMESTER EXAMINATION**

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

**COURSE CODE: MIC 210**

**COURSE TITLE: GENERAL MICROBIOLOGY**

**DATE: 8/5/2015**

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

**INSTRUCTIONS TO CANDIDATES:**

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

**SECTION A (28 MARKS): ATTEMPT ALL QUESTIONS**

1. Describe the different shapes that bacteria exhibit under normal conditions. (3 marks)

2. a. Explain why Mycoplasm are pleomorphic in nature. (1 mark)

 b. What is the efficacy of Penicillin on the above organism. (2 marks)

3. Classify microorganisms based on their temperature requirements. (4 marks)

4. How does temperature affect growth of microorganisms. (3 marks)

5. In attempting to isolate pure cultures, what challenges are likely to be experienced. (4 marks)

6. Describe the different types of synthetic culture media often used in microbiological laboratories. (3 marks)

7. Explain why Gram Staining is not performed on human cells. (4 marks)

8. Outline the types and functions of proteins associated with plasma membrane. (4 marks)

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

9. a. Explain common host defense mechanisms. (4 marks)

 b. Explain the principle of administering vaccines. (2 marks)

 c. Discuss the microbial characteristics that would favour the use of a vaccine. (8 marks)

10. a. Describe the steps in Gram stain procedure. (10 marks)

 b. Give the colour of Gram positive and Gram negative cells. (4 marks)

11. With the aid of a diagram, describe the fluid-mosaic model of a plasma membrane. (14 marks)

12. Discuss in detail the replication cycle of viruses. (14 marks)