



MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS

2017/2018 ACADEMIC YEAR

FOURTH YEAR SECOND SEMESTER

**SCHOOL OF TOURISM AND NATURAL RESOURCES
MANAGEMENT**

**BACHELOR OF ENVIRONMENTAL BIOLOGY AND
HEALTH**

COURSE CODE: EBH 413

COURSE TITLE: ENVIRONMENTAL MICROBIOLOGY

DATE: 18TH APRIL, 2018

TIME: 0830 – 1030HRS

INSTRUCTIONS TO CANDIDATES

- Answer question ONE and any Other TWO questions
- Use illustrations where appropriate

SECTION A: ANSWER ALL QUESTIONS

1. Discuss the principle of autoclave? **[2 marks]**
2. Discuss the classification of bacteria in terms of their structure and characteristics **[4 marks]**
3. (a) What is the importance of microscopy in Microbiology? **[3 marks]**
(b) Explain briefly the principle of Fluorescent microscope. **[3 marks]**
(c) Name two dyes used in fluorescent microscopy to visualize the samples **[2marks]**
4. Write down the names of different types of microscopes **[2 marks]**
5. (a) Define Growth. **[2 marks]**
(b) Explain the different phases in growth curve with proper diagram **[6 marks]**
6. Differentiate between batch culture and continuous culture **[2 marks]**
7. Why is 70% ethanol is more effective than 95% ethanol **[2 marks]**

SECTION B: ANSWER ANY THREE QUESTIONS

6. Discuss the physical methods to control microorganisms **[15 marks]**
8. Discuss the Industrial microbiology with reference to Industrial application and Agricultural wastes **[15 marks]**
10. Discuss some of the diseases caused by bacteria **[15 marks]**
11. Discuss the effects of environmental factors on bacterial growth and survival **[15 marks]**

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