



KISII UNIVERSITY
UNIVERSITY EXAMINATIONS

THIRD YEAR EXAMINATION FOR THE AWARD OF THE DEGREE OF
BACHELOR OF SCIENCE IN LABORATORY TECHNOLOGY
SECOND SEMESTER 2021/2022
(FEBRUARY-JUNE, 2022)

BSLT 335 : BIO-MICROBIAL LABORATORY TECHNIQUES

STREAM: Y3 S2

TIME: 2 HOURS

DAY: MONDAY, 12:00 PM – 2:00 PM

DATE: 23/05/2022

INSTRUCTIONS:

- 1. Do not write anything on this question paper.**
- 2. Answer all questions in section A and any TWO in section B.**

SECTION A: ANSWER ALL QUESTIONS [TOTAL 40 MARKS]

1. Draw and label a microscope, explain its uses, handling and maintenance.

[8marks]

2. Giving relevant examples differentiate a gram positive from a gram negative bacteria highlighting the principles behind it.

[8marks]

3. Giving examples briefly describe the units of measurement and its validity.

[8 marks]

4. Describe how you could obtain a pure culture from a given infected plant sample.

[8 marks]

5. With relevant examples explain sterilization as a bio-microbial technique.

[8 marks]

SECTION B: ANSWER TWO QUESTIONS [TOTAL 30 MARKS]

6. With relevant examples explain genetic engineering in bacteria highlighting its various applications/contributions to research. [15marks]
7. Describe five biochemical tests used in identification of microorganisms in the laboratory and explain the principal behind an autoclave and incubator as used in the laboratory. [15 marks]
8. Describe preservation/storage of microorganisms, highlighting the equipment and reagents used and indicate their concentrations. [15marks]