



KENYATTA UNIVERSITY

SUPPLEMENTARY/SPECIAL EXAMINATION 2020/2021

**EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN ANIMAL
HEALTH AND PRODUCTION**

KAS 113: INTRODUCTION TO MICROBIOLOGY

OCTOBER 2021

TIME: 2 HOURS

INSTRUCTIONS:

SECTION A: Answer ALL Questions. (40 MARKS)

1. Explain Kosh's postulates that define the critical test for the involvement of a microorganism in disease. (5 marks)
2. Outline the contribution made by the following scientist in the early field microbiology: (5 marks)
 - i. Louis Pasteur
 - ii. Edward Jenner
 - iii. Leeuwenhoek
 - iv. Alexander Flemming
 - v. Joseph Lister
3.
 - i. Differentiate between Selective and Enriched Media.
 - ii. Enriched and Enrichment Media (5 marks)
4. Name and state the functions of the following bacterial appendages. (5 marks)
 - i. Glycocalyx
 - ii. Outer membrane
 - iii. Cell wall
 - iv. Pili
 - vi. Flagella

5. Classify and define bacteria based of oxygen requirement. (5 marks)
6. Giving examples, differentiate between simple and differential stain. (5 marks)
7. State FIVE major differences between prokaryotic and eukaryotic cells. (5 marks)
8. State the physical requirements for bacterial growth. (5 marks)

SECTION B: Answer any TWO Questions. (30 marks)

9. With the aid of neatly labeled diagram, describe the bacterial growth curve and state the activities in each phase. (15 marks)
10. Describe the classification of bacterial cells based on the cell wall morphology. Provide specific examples in each case. (15 marks)
11.
 - a) Describe the process for making a streak plate to obtain pure cultures. (8 marks)
 - b) Classify culture media based on consistency. (7 marks)