

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**EXAMINATION FOR THE AWARD OF DEGREE
OF BACHELOR OF SCIENCE IN ANIMAL SCIENCE**

BOTA 436: INDUSTRIAL MICROBIOLOGY

STREAMS: BSC (ANSC)

TIME: 2 HOURS

DAY/DATE: MONDAY 16/11/2020

2.30 P.M. – 4.30 P.M.

INSTRUCTIONS:

SECTION A (30 MARKS)

1. Describe the features of a bioreactor (5 marks)
2. Describe the methods that are used for preservation of microorganisms in continuous metabolic state (4 marks)
3. Describe the quality control measures in industries (4 marks)
4. State the applications of ethanol produced through fermentation (4 marks)
5. Outline the advantages of batch fermentation process (5 marks)
6. Describe the features of an industrial production process (4 marks)
7. Describe the preparation of inoculum during fermentation process (4 marks)

SECTION B (40 MARKS): ANSWER ANY TWO QUESTIONS

8. Discuss the production of methane by anaerobic digestion of substrates (20 marks)
 9. Discuss the properties of an ideal microorganisms for an industrial process (20 marks)
 10. Discuss the production of enzymes from microbes (20 marks)
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