

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**SECOND YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR
OF SCIENCE IN ANIMAL PRODUCTS PROCESSING AND TECHNOLOGY**

ANPT 232: MILK MICROBIOLOGY AND HYGIENE

STREAMS:

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 12/04/2023

11.30 A.M – 1.30 P.M

INSTRUCTIONS:

Answer all questions in section A and any two in section B

SECTION A (30 MARKS)

1. Briefly discuss the impact of mastitis on milk quality. [5 marks]
2. Briefly discuss ways of controlling mastitis in cattle. [5 marks]
3. John always ensures his animals are free from diseases. However, after the milk was found to have a high microbial load. Briefly discuss what might have caused this. [5 marks]
4. Briefly discuss the procedure of collecting and storage of milk samples from an animal suspected to be suffering from mastitis for laboratory analysis. [5 marks]
5. Discuss ways of preservation of milk products to increase the shelf life. [4 marks]
6. Aflatoxin is a fungal toxin that contaminates milk causing serious economic and food safety issues. Discuss the sources of aflatoxin in milk and two ways of preventing aflatoxin contamination of milk. [6 marks]

SECTION B (40 MARKS)

7. Microbial contamination may lead to milk being unfit for human consumption and causing milk borne diseases as well as affecting milk quality. Discuss this statement under the following:
- (a) Define a milk borne disease. [2 marks]
 - (b) How microbial contamination affects milk quality [4 marks]
 - (c) Five (5) microbes voided in milk and the disease they cause in humans. [8 marks]
 - (d) Ways to prevent milk borne-diseases. [6 marks]
8. As a milk inspector in a milk cooling plant, discuss the steps you would take once milk has been delivered to you for inspection, highlighting the platform tests you would perform and their significance. [20 marks]
9. Discuss milk adulteration under the following sub headings;
- (a) Three methods of milk adulteration [3 marks]
 - (b) Effect of milk adulteration on milk quality and human health. [10 marks]
 - (c) Three ways of detecting milk adulteration. [3 marks]
 - (d) Prevention of milk adulteration. [4 marks]
-