NATIONAL UNIVERSITY OF LESOTHO

BSc ENVIRONMENTAL HEALTH

END OF SEMESTER B EXAMINATIONS

MAY 2023 **MARKS: 100** **TIME: 3 HOURS**

EHS3210 2022/23: QUALITY ASSURANCE IN ENVIRONMENTAL HEALTH

INSTRUCTIONS

1. Answer all questions and label each answer legibly
2. Use a calculator and show your work for question 6
3. No external material is allowed as a term of reference for this exam

QUESTION 1

Define the following terms:

a) Quality control
b) Quality assurance
c) Standard Operating Procedure
d) Total Quality Management
e) Food traceability

[10]

QUESTION 2

Differentiate between the producer's risk and consumer's risk. [5]

QUESTION 3

a. Mention the principles of quality management (ISO 9001). [7]
b. Briefly discuss the requirements ISO 9001 (PDCA cycle). [16]

QUESTION 4

Using the fish bone diagram, indicate how you would conduct a root cause analysis for a food product that tested positive for Salmonella. The source of contamination in this case is unknown. Construct your fish bone diagram using the following generic categories: materials, methods, measurements, machines, environment and personnel. [24]

QUESTION 5

Lebeko Ltd. sends a lot of 2000 cans of beans to a restaurant Goodies Ltd with an assumed percentage defective of 25%. Goodies Ltd planned to conduct a quality check on the received products. However, since conducting a 100% inspection would be costly and would destroy all the products, they decided to use acceptance sampling by variables method. By using the method, the restaurant plans to use a single sampling plan with 50 cans that were randomly selected. The restaurant decided to accept the lot if the defective cans were below 10%, and reject it if it is 10% or above.

What is the probability that less than 10% of the cans are defective? [16]

QUESTION 6

Discuss the 4 main objectives of food quality control and assurance. [12]

QUESTION 7

Illustrate the food recall decision matrix. [10]