

**NATIONAL UNIVERSITY OF LESOTHO
FACULTY OF AGRICULTURE
DEPARTMENT OF ANIMAL SCIENCE**

SECOND SEMESTER EXAMINATION

ANS2508: FOOD SAFETY AND PUBLIC HEALTH

JUNE 2023

MARKS: 100

TIME: 3 HOURS

INSTRUCTIONS:

- Answer all questions
- Start each question on a new page with the exception of Section A.

SECTION A

Choose the correct answer in the following:

- 1) High risk food is used to describe:
 - a. food containing bacterial pathogens
 - b. raw foods contaminated by viruses
 - c. unwashed food covered with soil and dirt
 - d. ready-to-eat food supporting bacterial growth

- 2) A food safety hazard is BEST defined as:
 - a. a significant risk to consumer health from food
 - b. bacteria and chemicals found in all types of foods
 - c. pathogenic bacteria common in some raw foods
 - d. an agent or condition in food that may cause harm

- 3) Which of these are ALL examples of physical contamination?
 - a. pest bodies, detergents, mold
 - b. viruses, false nails, peanuts
 - c. hair, cardboard, glass
 - d. wood, pesticides, polythene

- 4) A spore is the:
 - a. resistant stage of some bacteria
 - b. heat sensitive stage of all bacteria
 - c. vegetative stage of all bacteria
 - d. active growth stage of some bacteria

- 5) All of the following statements about toxins are correct except for:
 - a. some bacteria release toxins when growing in food
 - b. all bacterial toxins are destroyed by heating
 - c. some bacteria release toxins into the human gut
 - d. toxins tend to cause vomiting and diarrhoea

- 6) Which of the following are most likely to be symptoms of physical hazards in food?
 - a. choking and cuts inside the mouth
 - b. nausea and diarrhoea and vomiting
 - c. burning sensation in the mouth
 - d. anaphylactic shock from peanuts

- 7) Correct refrigerator temperatures will prevent the growth of:
- all bacteria and viruses
 - psychrophilic bacteria
 - all bacterial spores
 - most pathogenic bacteria
- 8) Warm water should be used for hand washing because:
- the temperature of the water kills bacteria
 - it allows mixer taps to be used effectively
 - soap is made more effective at removing bacteria
 - the temperature of the water kills viruses
- 9) In a HACCP system, monitoring is used to:
- set critical limits at CCPs
 - verify the HACCP plan
 - confirm the process is controlled
 - determine critical control points
- 10) The main reason for implementing HACCP-based procedures is to:
- prevent identified food safety hazards causing harm
 - produce evidence for a due diligence defense
 - comply with accredited quality standards
 - obtain a good local authority food hygiene rating

[20]

SECTION B

QUESTION 1

Describe the following terms with examples as applied in food safety:

- a. Food safety
 - b. HACCP
 - c. Vehicles of contamination
 - d. Temperature abuse
 - e. Danger zone
- [20]

QUESTION 2

- a) Describe any two (2) methods of food contamination. [5]
- b) Pathogens act differently to cause diseases. Discuss the modes of action for pathogens to cause food borne illness. [15]

QUESTION 3

Explain how the following factors play important roles in the epidemiology of emerging foodborne diseases:

- a. Changes in the pathogens
 - b. Food product development
 - c. Dietary habits
 - d. Food trade
 - e. Travel and migration
- [20]

QUESTION 4

Discuss four important legislative measures for ensuring supply of safe food to consumers at all times.

[20]