

UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DIPLOMA IN ENVIRONMENTAL HEALTH

FINAL EXAMINATION PAPER 2011.

TITLE OF PAPER : FOOD HYGIENE

COURSE CODE : EHS 102

DURATION : 2 HOURS

MARKS : 100

INSTRUCTIONS : ANSWER ONLY FOUR QUESTIONS

: QUESTION ONE IS COMPULSORY

: EACH QUESTION CARRIES 25 MARKS.

: WRITE NEATLY

: BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER.

DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR.

Question 1

Multiple Choice Questions

(Choose the most best answer)

1. Which one of the following statements best describes the effect that food poisoning bacteria usually have on food?
 - A. It appears normal but it tastes bad
 - B. It appears stale and dry and it has an 'off' taste.
 - C. It tastes, smells and looks normal
 - D. It has an abnormal appearance and has an unpleasant smell
 - E. None of the above

2. Which of the following statements is true?
 - A. All bacteria are harmful.
 - B. Some bacteria are harmful.
 - C. No bacteria are harmful.
 - D. Only bacterial spores are harmful.
 - E. None of the above

3. Which of the following pair of people are at special risk from food poisoning?
 - A. Nurses and children
 - B. Children and old people
 - C. Old people and chefs
 - D. Chefs and nurses
 - E. All of the above

4. -----are not suitable for use on food contact surfaces.
 - A. amphoteric
 - B. disinfectants
 - C. chlorine based sanitizers
 - D. iodine based sanitizers
 - E. quaternary ammonium compounds sanitizers

5. What should you do if you cut yourself at work?
 - A. Grin and cry
 - B. Cover the wound with lint and a bandage.
 - C. Stop work and go home.
 - D. Cover the wound with a waterproof dressing
 - E. Take pain killers and continue to work

6. The main reason why hair must be covered is that:
 - A. long hair gets in your eyes
 - B. hats are part of the kitchen uniform
 - C. hats look smarter
 - D. hats keep your hair clean
 - E. hair and dandruff can fall into food

7. Which one of the following statements explains what is meant by the term 'clean as you go'?
 - A. Clean down before you leave for home.
 - B. Clean up every hour throughout the day.
 - C. Once a year thoroughly clean the premises
 - D. Clean up before moving on to the next task
 - E. Clean before going home

8. Which of the following methods of washing glasses will destroy bacteria?
 - A. Water at 20 deg C
 - B. Detergent and water at 20 deg C
 - C. Detergent and water at 50 deg C
 - D. Sanitizer and water at 20 deg C
 - E. Sanitizer and water at 50 deg C

9. Hot holding of ready to eat food should be kept at a temperature above:
 - A. 37 deg C
 - B. 45 deg C
 - C. 55 deg C
 - D. 60 deg C
 - E. 100 deg C

10. Factors inherent in a food that can influence microbial growth are known as:
 - A. extrinsic factors
 - B. intrinsic factors
 - C. nutritional factors
 - D. physicochemical factors
 - E. processing factors

11. Basic steps for cleaning kitchen utensils are to:
 - A. remove gross soil, apply detergent, scrub and rinse.
 - B. remove gross soil, wash, rinse and dry
 - C. remove gross soil, apply detergent, scrub, apply disinfectant, and rinse
 - D. remove gross soil, wash and then disinfect
 - E. remove gross soil, apply detergent, scrub, rinse, apply disinfectant and rinse.

12. Which one of these chemicals is a solvent for cleaning agents and a carrier for the removal of soil?
- A. water
 - B. inorganic acids
 - C. organic acids
 - D. mild alkalis
 - E. alcohol
13. Which microorganism is likely to spoil hot bread wrapped in plastic bag?
- A. yeasts
 - B. fungi
 - C. molds
 - D. bacteria
 - E. microbes
14. Present day knowledge indicates that most foodborne illness is caused by:
- A. viruses
 - B. bacteria
 - C. protozoa
 - D. fungi
 - E. microorganisms
15. Most pathogens of foodborne disease thrive on foods high in:
- A. proteins
 - B. sugars
 - C. carbohydrates
 - D. fats
 - E. any of the above
16. Which of the following foods have the lowest pH?
- A. sausages
 - B. tomatoes
 - C. mango
 - D. sweet potatoes
 - E. guavas
17. Which of the following symptoms is not generally included in those of chemical food poisoning?
- A. nausea
 - B. vomiting
 - C. abdominal pain
 - D. fever
 - E. fatigue

18. Which of the following areas would be more appropriate to designate as the places where food service employees could smoke?
- A. cloak room areas
 - B. food service areas
 - C. dishwashing areas
 - D. food preparation areas
 - E. food store room areas
19. A build up of large populations of insects in food premises is most effectively prevented by:
- A. periodic spraying
 - B. effective basic sanitation
 - C. stock rotation
 - D. using tight fitting lids for refuse containers
 - E. maintaining poison bats
20. An agent that forms soluble complexes when combined with certain metal ions (such as, calcium and magnesium) and is used to prevent formation of film on equipment is:
- A. an alkali
 - B. an anionic wetting agent
 - C. a peptizer
 - D. a sequestering agent
 - E. a emulsifer
21. Washing, when done properly, is effective in reducing bacteria. Not all foods can be, or should be, washed. Which of the following must be washed before cooking or serving?
- A. eggs
 - B. lettuce
 - C. canned vegetables
 - D. red meat
 - E. sweets
22. Hardness in water is caused by:
- A. dissolved total chemicals
 - B. calcium and chlorides salts
 - C. calcium and magnesium salts
 - D. fluorides and chlorides salts
 - E. water contaminated by fertilizer

23. Which disinfectant or sanitizer can be used to kill microorganisms on dirty equipment?
- chlorine based compounds
 - iodine based sanitizers
 - quaternary ammonium compounds
 - amphoterics
 - any of the above
24. Which disinfectant or sanitizer can be used in hard water?
- chlorine based sanitizer
 - quaternary ammonium compounds
 - iodine based sanitizer
 - organic acid based sanitizers
 - amphoterics
25. ----- may be used as a hand disinfectant or sanitizer.
- amphoterics
 - cationic wetting agents
 - chlorine based sanitizers
 - disguanides
 - B and D

[25 Marks]

Question 2

Define the following terms commonly used in relation to food safety;

- | | | |
|----|-------------------------------|-----|
| a) | D-value | [2] |
| b) | Z-value | [2] |
| c) | Adulterate | [2] |
| d) | Food hygiene | [2] |
| e) | Food audit | [2] |
| f) | Food allergy | [2] |
| g) | Freezer burn | [3] |
| h) | Lag phase | [2] |
| i) | Low risk foods | [3] |
| j) | Xerophiles | [2] |
| k) | High risk food | [3] |
| l) | Hermetically sealed food cans | [2] |

[25 Marks]

Question 3

- a) Which symptoms are associated with food borne illness? [3]
 - b) Name three causes of food borne illness apart from bacteria. [3]
 - c) What are the main sources of food contamination in the kitchen? [4]
 - d) Discuss the benefits and limitations of Quaternary ammonium compounds as a sanitizer. [10]
 - e) Write short notes on the Cleaning out of place (COP) principle. [5]
- [25 Marks]**

Question 4

- a) A new food premise has applied to the city council of Mbabane for a construction permit. The owner seeks an advice on the type of floor to be chosen for food premise. Advise him or her. [8]
 - b) Cleaning programs should be designed to suit the needs or requirements of a particular product and process. Why is that so? [6]
 - c) How do cleaning agents or sanitizers assist the cleaning process? [5]
 - d) Restaurants are required by law to ensure that food contamination is kept to minimal levels. How would you ensure that this practice is in place? [6]
- [25 Marks]**

Question 5

The physical environment in food premises has an important contribution to the quality of the final food product. Explain this statement.

[25 Marks]