



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DEGREE IN ENVIRONMENTAL HEALTH
FINAL EXAMINATION PAPER 2018

TITLE OF PAPER : FOOD HYGIENE

COURSE CODE : EHS 227

DURATION : 2 HOURS

MARKS : 100

- INSTRUCTIONS** :
- : ANSWER ONLY FOUR QUESTIONS
 - : QUESTION ONE IS COMPULSORY
 - : EACH QUESTION CARRIES 25 MARKS.
 - : READ THE QUESTIONS & INSTRUCTIONS CAREFULLY
 - : NO PAPER SHOULD BE BROUGHT INTO THE EXAMINATION ROOM.
 - : 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 Best Answer)

1. Nondisposable cloths and sponges used to clean surfaces should be handled in which one of the following ways at the end of each work day;
 - A. Rinsed and hung to air dry overnight
 - B. Boiled, washed and dried quickly
 - C. Washed, rinsed and dipped in a sanitizer solution
 - D. Kept in a disinfectant overnight
 - E. Kept in a refrigerator overnight

2. Basic steps for cleaning kitchen utensils are to;
 - A. remove gross soil, apply detergent, scrub, rinse
 - B. remove gross soil, wash, rinse and dry
 - C. remove gross soil, apply detergent, scrub, apply disinfectant, rinse
 - D. remove gross soil, wash and disinfect in same step
 - E. remove gross soil, apply detergent, scrub, rinse and apply disinfectant

3. The direct or indirect transmission of objectionable matter to a food product is called by which of these names;
 - A. adulteration
 - B. contamination
 - C. infection
 - D. infestation
 - E. pollution

4. Which of these cleaning agents is (are) neutralized by the presence of food residues during cleaning?
 - A. amphoteric
 - B. quaternary ammonium compounds
 - C. chlorinated compounds
 - D. anionic wetting agents
 - E. both A, and C

5. Reports of food borne disease indicate that the implicated food was usually:
 - A. a canned food
 - B. a food held for long periods at temperatures favorable to bacterial multiplication
 - C. an improperly cooked food.
 - D. a food stored too long in the refrigerator.
 - E. an unwrapped food that has been handled by unwashed hands.

6. Anionic wetting agents are good detergents but they will not;
 - A. wet surfaces well
 - B. emulsify fats, waxes and pigments
 - C. destroy bacteria
 - D. penetrate crevices and woven fabrics
 - E. both C and D

7. Which sanitizer is appropriate for hand washing?
 - A. quaternary ammonium compounds
 - B. anionic wetting agent
 - C. amphoteric compounds
 - D. iodine based sanitizers
 - E. A and D

8. Which sanitizer is not appropriate for hand washing?
 - A. quaternary ammonium compounds
 - B. anionic wetting agents
 - C. amphoteric compounds
 - D. iodine based sanitizers
 - E. both A and D

9. Choose the most appropriate sanitizer (s) to be used in hard water;
 - A. Chlorine based sanitizers
 - B. Quaternary ammonium sanitizers
 - C. Organic acids based sanitizers
 - D. Amphoteric sanitizers
 - E. A and D

10. Choose the most effective sanitizer to kill both gram negative and gram positive bacteria.
 - A. Amphoteric compounds
 - B. Quaternary ammonium compounds
 - C. Chlorine based sanitizers
 - D. Iodine based sanitizers
 - E. Both C and D

11. Factors inherent in a food that can influence microbial growth are known as;
 - A. extrinsic factors
 - B. intrinsic factors
 - C. processing factors
 - D. nutritional factors
 - E. both B and D

12. What is the major source of Staphylococcal infection?
- A. Excreta of animal
 - B. Excreta of human
 - C. Vegetables that have soil contamination
 - D. Unwashed food handlers hands
 - E. The picking of nose by food handlers
13. Which type of cleaning agent can be used to loosen and soften burnt food residues on stoves and ovens
- A. Abrasive cleaning agent
 - B. Amphoteric cleaning agent
 - C. Enzymes to digest the food residue
 - D. Sequestering cleaning agent
 - E. Liquid soap
14. Which one of the following statements best describes the effect that food poisoning bacteria usually have upon food?
- A. It appears normal but it tastes horrible
 - B. It appears stale and dry and it has an 'off' taste.
 - C. It tastes, smells and looks normal
 - D. It appears and tastes normal but it has an unpleasant smell
 - E. Both C and D
15. 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. Only toxin producing microorganisms are harmful.
16. Which of the following pairs 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
17. 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

- 18 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. Clean thoroughly every time you see dirt
 - D. Clean up before moving on to the next task
 - E. Clean before going home
19. The time required to destroy 90% of population of microorganisms is known as the;
- A. D value
 - B. Z value
 - C. C value
 - D. F value
 - E. L value
20. Which of the following symptoms is not generally included in those of chemical food poisoning?
- A. nausea
 - B. abdominal pains
 - C. vomiting
 - D. fever
 - E. all of the above
21. A buildup of large populations of insects in food establishments is most effectively prevented by;
- A. Effective basic sanitation
 - B. Periodic spraying
 - C. Stock rotation
 - D. Maintaining poison bait
 - E. Control of vegetation and debris next to buildings
22. No food sanitation activity is complete without;
- A. A complete and functioning food laboratory within the health department building
 - B. Access to a properly equipped and functioning laboratory
 - C. A combined public health industry inspection procedure
 - D. An industry self-inspection program
 - E. A proper standard on food sanitation

23. Botulinum cook is;
- A. thermal process applied to high acid canned food, which reduces the chance of survival of one spore of Clostridium botulinum to less than one spore in 10^{12} (equivalent to 120°C for three minutes)
 - B. thermal process applied to low acid canned food, which reduces the chance of survival of one spore of Bacillus botulinum to less than one spore in 10^{12} (equivalent to 120°C for three minutes)
 - C. thermal process applied to low acid canned food, which reduces the chances of survival of one spore of Clostridium botulinum to less than one spore in 10^{12} (equivalent to 120°C for three minutes)
 - D. thermal process applied to acidic canned food, which reduces the chances of survival of one spore of Clostridium botulinum to less than one spore in 10^{12} (equivalent to 120°C for three minutes)
 - E. thermal process applied to non-acidic canned food, which reduces the chances of survival of spores of Clostridium botulinum and the heat is set at 120°C for four minutes
24. Disinfectant is a chemical that;
- A. destroy microorganisms
 - B. destroy bacteria
 - C. destroy molds and yeasts
 - D. removes dirty and fats
 - E. removes microorganisms
25. A soap will;
- A. kill microorganisms
 - B. remove microorganisms
 - C. kill bacteria and its spores
 - D. kill molds and yeasts
 - E. cleans surfaces properly

[25 Marks]

Question 2

- a) Using appropriate examples, explain how the following factors influence the cleaning of equipment and utensils in food establishments.
 - i) Water hardness [3]
 - ii) Food residues [4]
 - iii) pH [4]
 - iv) Equipment material [4]
- b) Disinfectants play a very important role in the quest to control food borne infection in food outlets. Explain this statement. [5]
- c) Poly vinyl chloride (PVC) tiles are not appropriate floor finish for the UNESWA kitchen. Explain [5]

[25 Marks]

Question 3

- a) What is the main purpose of a canopy and extractor fan over the cooking area in the restaurant kitchens? [4]
 - b) Discuss the duties of an Environmental Health Officer (EHO) in food hygiene. [10]
 - c) Using appropriate examples define cross-contamination in food premises. [5]
 - d) Discuss the information required before a food premise floor finish is chosen. [6]
- [25 Marks]**

Question 4

- a) Using the five keys to safer food recommended by the World Health Organization (WHO) how we can prevent foodborne diseases in food establishments [15]
 - b) Define the standard for efficiency that is required for all sanitizers. [5]
 - c) How do detergents contribute in the cleaning of food equipment and utensil in food premises? [5]
- [25 Marks]**

Question 5

- a) The design and layout of food premises must follow a “linear flow” so that cross-contamination in food establishment is either reduced or eliminated. Explain this statement. [15]
 - b) Using appropriate examples discuss the benefits and shortcomings of quaternary ammonium chemical compounds’ as a sanitizer in food establishments. [10]
- [25 Marks]**