

UNIVERSITY OF SWAZILAND
Faculty of Health Sciences
DIPLOMA IN ENVIRONMENTAL HEALTH
FINAL EXAMINATION PAPER 2008.

TITLE OF PAPER : FOOD HYGIENE

COURSE CODE : EHS 10~~2~~

DURATION : 2 HOURS

MARKS : 100

INSTRUCTIONS :

- : ANSWER ANY 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. Cooked foods not immediately served;
 - A. Offer no hazard in the transmission of foodborne diseases
 - B. If properly protected, need no refrigeration
 - C. Should be cooled quickly and stored at 5 ° C until served
 - D. Can be kept indefinitely at normal refrigeration temperature
 - E. B and C are true
2. Food handlers with boils or infected wounds should;
 - A. Be assigned jobs where there is little likelihood of transmission of infection
 - B. Be allowed to work with no restrictions
 - C. Be allowed to work with no restrictions if the wound is bandaged
 - D. Be discharged from work
 - E. Be given a leave until wound heals
3. 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
4. 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
5. Which kind of agents is used to loosen and soften burnt food residues on ovens;
 - A. emulsifier
 - B. sequestering agent
 - C. amphoteric compounds
 - D. abrasive compounds
 - E. enzymes to digest the residues

6. 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
7. What is the intrinsic factor in the preservation of fermented foods?
- A. Acidity
 - B. Alkalinity
 - C. Chemical preservatives
 - D. Heat
 - E. Water activity
8. Food containing foodborne disease bacteria are:
- A. not necessarily decomposed in appearance
 - B. detectable by smell
 - C. detectable by taste
 - D. detectable by smell & taste
 - E. detectable by smell, taste & appearance
9. Which one of the following foods has the lowest pH?
- A. guava
 - B. apple
 - C. tomato
 - D. shrimps
 - E. peas
10. Bacterial contaminants:
- A. Multiply rapidly in dehydrated foods
 - B. Resume multiplication when dehydrated foods are reconstituted.
 - C. Do not grow well in reconstituted dehydrated foods.
 - D. Are eliminated in foods during the dehydration process.
 - E. Are not found in dehydrated foods.
11. A soap is anionic wetting agent and a good detergents but it will not;
- A. wet surfaces
 - B. emulsify fats, waxes and pigments
 - C. destroy bacteria
 - D. penetrate crevices and woven fabrics
 - E. do any of the above

12. Which sanitizer is appropriate for hand washing?
- A. Quaternary ammonium compounds (Quats)
 - B. Anionic wetting agent (soap)
 - C. Amphoterics
 - D. Iodine based sanitizers
 - E. A and D
13. Which sanitizer is not appropriate for hand washing?
- A. Quaternary ammonium compounds (Quats)
 - B. Anionic wetting agent (soap)
 - C. Amphoterics
 - D. Iodine based sanitizers
 - E. A and D
14. Choose the most appropriate sanitizer to be used in hard water;
- A. Chlorine based sanitizers
 - B. Iodine based sanitizers
 - C. Organic acids based sanitizers
 - D. Amphoterics
 - E. A and D
15. Choose the most effective sanitizer to kill both gram negative and gram positive bacteria.
- A. Amphoterics compounds
 - B. Quaternary ammonium compounds
 - C. Chlorine based sanitizers
 - D. A and C
 - E. B and C
16. An agent that forms soluble complexes when combined with certain metal ions (such as calcium & 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. an emulsify
17. Which one of these kinds of substances has both wetting ability and bacterial action?
- A. anionic wetting agents
 - B. cationic wetting agents
 - C. chlorinated wetting compounds
 - D. nonionic wetting compounds
 - E. soap

18. A chemical agent that destroys all living microorganisms is called a:
- A. disinfectant
 - B. detergent
 - C. sanitizer
 - D. sporicide
 - E. sterilizer
19. A toxin excreted into food medium by a bacterial cell is called a(n):
- A. kenotoxins
 - B. exotoxins
 - C. enterotoxins
 - D. zoonotoxin
 - E. endotoxins
20. Sodium benzoate is added in soft drinks in Swaziland in order to;
- A. Destroy bacteria
 - B. Destroy molds
 - C. Inactivate enzymes
 - D. Restore the color of soft drinks
 - E. All of the above
21. What is the major source of staphylococcal infection?
- A. excreta of human
 - B. excreta of animals
 - C. unwashed hands
 - D. the nose of infected personnel
 - E. soil
22. What microorganism is likely to spoil plastic wrapped hot bread?
- A. molds
 - B. bacteria
 - C. yeasts
 - D. protozoa
 - E. virus
23. 'UHT' cartooned milk if not stored in the refrigerator for more than a day, it will;
- A. remain fresh
 - B. spoil
 - C. ferment
 - D. B and C
 - E. none of the above

24. Pasteurized bottled milk if not stored in the refrigerator for more than a day, it will;

- A. remain fresh
- B. spoil
- C. ferment
- D. B and C
- E. none of the above

25. What is primary factor in the preservation of soft drinks?

- A. Low pH
- B. Chemical preservation
- C. Sugar added
- D. refrigeration
- E. A and B

[25 Marks]

Question 2

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

- a) D-value [3]
- b) HACCP (write in full) [3]
- c) Z-value [3]
- d) Danger Zone of Bacterial Growth [2]
- e) Neurotoxin [2]
- f) Halophile [2]
- g) Thermotolerant microorganisms [2]
- h) Grease trap [2]
- i) Ambient temperature [1]
- j) Potable food [2]
- k) Organoleptic [3]

[25 Marks]

Question 3

- a) What factors influence the choice in the selection of kitchen floor and wall finish? [10]
- b) Discuss the advantages and disadvantages of the following floor finishes;
 - Quarry tiles [4]
 - Polyvinyl chloride (PVC) [6]
 - Ceramic tile [3]
- c) What is the main purpose of an extractor fan over the cooking area in the restaurant kitchens? [2]

[25 Marks]

Question 4

- a). Explain the three (3) most important principles that should be adhered to when designing a food establishment. [10]
- b). How does staphylococcal infection contaminate food? [3]
- c). Discuss the benefits and shortcomings of Quaternary Ammonium Compounds (Quats) as a sanitizer. [12]

[25 Marks]

Question 5

Discuss the measures that are necessary in order to control foodborne infection in restaurants?

[25 Marks]