

**UNIVERSITY OF SWAZILAND**  
**Faculty of Health Sciences**

**DIPLOMA IN ENVIRONMENTAL HEALTH**

**FINAL EXAMINATION PAPER 2009.**

**TITLE OF PAPER** : FOOD HYGIENE

**COURSE CODE** : EHS 102

**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. 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
  
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 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
  
4. The main reason for not allowing smoking in food preparation areas is because:
  - A. the fingers become contaminated with saliva
  - B. smoke causes cancer
  - C. it wastes time
  - D. ashtrays make the kitchen look dirty
  - E. all of the above
  
5. What should you do if you cut yourself at work?
  - A. Grin and bear it.
  - 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. What is the correct operating temperature for a refrigerator?
  - A. 1 to 10 deg C
  - B. 5 to 8 deg C
  - C. -18 deg C
  - D. 1 to 8 deg c
  - E. 1 to 4 deg C
  
8. At the temperature of a domestic refrigerator, food poisoning bacteria:
  - A. die
  - B. multiply slowly
  - C. forms spores
  - D. do not multiply
  - E. all of the above
  
9. 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
  
10. 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
  
11. Hot holding of ready to eat food should be kept at a temperature above:
  - A. 30 deg C
  - B. 37 deg C
  - C. 45 deg C
  - D. 55 deg C
  - E. 60 deg C

12. 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
13. What is the primary factor in the preservation of fermented foods?
- A. acidity
  - B. alkalinity
  - C. chemical preservatives
  - D. heat
  - E. water activity
14. 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.
15. Which one of these agents is a solvent for cleaning agents and a carrier for the removal of soil?
- A. alcohol
  - B. inorganic acids
  - C. organic acids
  - D. mild alkalis
  - E. water
16. Which type of agents is used to loosen and soften charred food residues on ovens?
- A. Abrasive compounds
  - B. Amphoteric compounds
  - C. Anionic wetting compounds
  - D. Enzymes
  - E. Organic acids
17. Which one these types of substances has both wetting ability and antibacterial action?
- A. anionic wetting agents
  - B. cationic wetting agents
  - C. Chlorinated wetting compounds
  - D. nonionic wetting compounds
  - E. soap

18. Which one of these hygienic procedures should not be recommended as a means of preventing foodborne diseases?
- A. report boils, diarrhea, or sore throat to supervisor
  - B. routine medical examinations of workers
  - C. wash hands after handling raw meat and poultry
  - D. when working, avoid picking nose and mouth and do not smoke
  - E. whenever possible, use clean utensils instead of for handling ready to eat foods..
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. 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
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' cartoned 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 [2]
- b) HACCP ( write in full) [1]
- c) Z-value [2]
- d) Danger Zone of Bacterial Growth [1]
- e) Osmophilic yeast [2]
- f) Halophilic bacteria [1]
- g) Thermoduric microorganisms [1]
- h) Cross-Contamination [2]
- i) Adulterate [2]
- j) Adjuvant [2]
- k) Organoleptic [5]
- l) Sequestering agent [1]
- m) Food hygiene [2]
- n) Mycotoxins [1]

[25 Marks]

**Question 3**

- a) What symptoms are associated with food borne illness? [3]
- b) Name three causes of food borne illness apart from bacteria. [3]
- c) What is high risk food? [2]
- d) Name four high risk foods. [4]
- e) What are the main sources of food contamination in the kitchen? [4]
- f) What is meant by cross-contamination of food? [3]
- g) List four occasions when food handlers should wash their hands [4]
- h) Why should jewellery not be worn while working in the kitchen? [2]

[25 Marks]

**Question 4**

- a) Why disinfectants can not be relied or dependant on to sterilize the items or equipment to which they are applied? [6]
- 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 does cleaning agents or sanitizers assist the cleaning process? [5]
- d) Discuss the three (3) hygiene procedures that are recommended to reduce contamination in a restaurant. [8]

**[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]**