



UNIVERSITI KUALA LUMPUR
INSTITUTE OF MEDICAL SCIENCE TECHNOLOGY

FINAL EXAMINATION
OCTOBER 2025 SEMESTER

COURSE CODE : HGD21003
COURSE TITLE : FOOD HYGIENE AND TECHNOLOGY
PROGRAMME NAME : DIPLOMA IN ENVIRONMENTAL HEALTH
DATE : 29 JANUARY 2026
TIME : 9:00AM - 12:00PM
DURATION : 3 HOURS



INSTRUCTIONS TO CANDIDATES

1. Please read the instructions given in the question paper CAREFULLY.
2. This question paper is printed on both sides of the paper.
3. This question paper consist of TWO sections.
4. Section A consist 25 MCQ or EMQ questions. Answer ALL questions.
5. Section B consist of four questions. Answer THREE (3) questions only.
6. Please write your answer on the answer booklet provided.
7. Please answer all questions in English only.
8. Please answer MCQ/EMQ questions using OMR sheet. *Tick if applicable*
9. Refer to the attached Formula/ Appendies. *Tick if applicable*

THERE ARE 13 PAGES OF QUESTIONS INCLUDING THIS PAGE

SECTION A (Total: 25 marks)

Answer ALL questions.

Please use the objective answer sheet provided.

1. A cooked rice sample stored at room temperature for 6 hours tests positive for *Bacillus cereus*. Which lapse in food hygiene most likely contributed to this contamination?
 - A. Failure to use iodophors during cleaning.
 - B. Storing raw and cooked foods in close proximity.
 - C. Insufficient handwashing during preparation.
 - D. Holding food in the temperature danger zone.

2. During an inspection, a food premise is found to have condensation forming on ceilings above open food. Why is this a critical food hygiene violation?
 - A. Condensation droplets can carry microorganisms and fall into food.
 - B. Condensation accelerates food dehydration.
 - C. Condensation reduces the efficacy of cleaning agents.
 - D. Condensation indicates the presence of chemical residues.

3. Which condition below best explains why *Staphylococcus aureus* contamination remains a significant risk in food despite proper cooking?
 - A. It is transmitted only through raw food handling.
 - B. It produces heat-stable toxins that remain after cooking.
 - C. It can form spores that survive high temperatures.
 - D. It thrives at refrigeration temperatures.

4. A food handler with a small cut on the finger continues working with a properly bandaged wound but without wearing gloves. What is the primary food hygiene concern?
- A. Introduction of allergens from wound-care materials.
 - B. Potential contamination through wound fluid if the bandage becomes loose.
 - C. Violation of equipment hygiene protocols.
 - D. Increased microbial growth due to elevated body temperature.
5. Under the Food Regulations 1985, which information must appear on a food label?
- A. Country's flag.
 - B. Name and address of manufacturer.
 - C. Price of the product.
 - D. Customer service hotline.
6. Foodborne illness can result from _____.
- A. eating too much food
 - B. overcooking vegetables
 - C. eating food that is too spicy
 - D. consuming contaminated food or drinks
7. GMP requires that food processing areas are _____.
- A. shared with non-food activities
 - B. painted with bright colors
 - C. used for storage of chemicals only
 - D. clean, well-maintained, and free from contamination

8. What is the correct slaughtering requirement for Halal meat?
- A. Slaughterer must be a sane, adult Muslim.
 - B. Animal must be slaughtered using any available tool.
 - C. Slaughtering does not require mentioning Allah's name.
 - D. Animal must be stunned and slaughtered by a non-Muslim.
9. Which of these is a *mandatory* document when applying for Halal certification?
- A. Equipment warranty card.
 - B. Marketing strategy.
 - C. Ingredient list with supplier Halal certificates.
 - D. Employee salary list.
10. Which authority is responsible for Halal certification in Malaysia?
- A. Ministry of Domestic Trade
 - B. SIRIM Malaysia
 - C. Department of Islamic Development Malaysia
 - D. Ministry of Health
11. The main purpose of food labelling regulations is to _____.
- A. promote brand popularity
 - B. provide consumers with accurate and essential information
 - C. encourage food manufacturers to use more additives
 - D. increase food prices

12. Which is a chemical contaminant?
- A. Fungus on fruit.
 - B. *Salmonella* in raw chicken.
 - C. Hair in food.
 - D. Excess pesticide residue.
13. Which factor contributes most to foodborne illness outbreaks?
- A. Refrigeration at 4°C.
 - B. Time–temperature abuse.
 - C. Proper handwashing.
 - D. Use of food thermometers.
14. Which sensory characteristic refers to the detection of chemical compounds by the nose?
- A. Color
 - B. Taste
 - C. Aroma
 - D. Texture
15. Standard Operating Procedures (SOPs) are important in HACCP because they _____.
- A. are optional for small businesses
 - B. focus only on product taste
 - C. replace training for staff
 - D. describe cleaning and operational procedures in a consistent manner

16. Which is the safest method to thaw frozen food?
- A. On the kitchen counter.
 - B. Near the window.
 - C. In warm water.
 - D. In the refrigerator.
17. Which of the following is a chemical hazard?
- A. Hair in food.
 - B. Excessive pesticide residue.
 - C. *Salmonella*
 - D. Mouse droppings.
18. Which practice can help to prevent cross-contamination?
- A. Storing raw meat above ready-to-eat foods.
 - B. Using the same cutting board for all foods.
 - C. Thawing food at the room temperature.
 - D. Washing hands before handling food.
19. Which of the following offence is covered under Section 13 of the Food Act 1983?
- A. Advertising food without approval.
 - B. Labeling food with incorrect weight.
 - C. Preparing or selling food that is unfit for human consumption.
 - D. Selling food without a license.

20. Which of the following is considered a biological hazard?
- A. Cleaning chemicals.
 - B. Broken glass.
 - C. Metal fragments.
 - D. Bacteria and viruses.
21. One of the main advantages of implementing HACCP is to _____.
- A. reduced ingredient costs
 - B. reduced employee workload
 - C. minimized food safety hazards and preventing foodborne illness
 - D. increased marketing opportunities
22. Which of the following is a key component of Good Manufacturing Practice (GMP)?
- A. Recipe development.
 - B. Advertising strategies.
 - C. Employee training in hygiene and safety.
 - D. Customer feedback collection.
23. Which of the following is the main purpose of Halal certification?
- A. To help consumers identify food prepared according to Islamic law.
 - B. To promote certain food brands.
 - C. To increase food price.
 - D. To improve product packaging.

24. Halal certification ensures that food is free from _____.
- A. artificial additives
 - B. high calories
 - C. non-halal ingredients such as pork and alcohol
 - D. genetically modified organisms
25. The list of ingredients on a food label must be arranged in _____.
- A. order of increasing weight
 - B. random order
 - C. alphabetical order
 - D. order of decreasing weight

SECTION B (Total: 75 marks)

Answer **THREE (3)** questions only.

Please use the answer booklet provided.

Question 1

A medium-sized catering company prepares cooked chicken rice for large institutional clients. Recently, several customers reported symptoms of foodborne illness. An internal audit revealed inconsistent temperature monitoring, unclear staff responsibilities, and inadequate documentation.

- (a) Identify three possible food safety hazards (biological, chemical, physical) relevant to the preparation of cooked chicken rice. Briefly explain why each hazard is significant.
- (6 marks)
- (b) Based on the scenario, propose two Critical Control Points (CCPs) that should be established in the process. Justify your choices.
- (4 marks)
- (c) Develop a critical limit for one of the CCPs you identified. Explain why this critical limit is appropriate.
- (3 marks)
- (d) Explain two monitoring procedures that staff should follow to ensure critical limits are met. Provide examples of measurement tools or methods.
- (4 marks)
- (e) The audit found unclear staff responsibilities. Outline two essential components of a Standard Operating Procedure (SOP) that would clarify roles in HACCP implementation.
- (4 marks)

- (f) Despite having a HACCP plan, the business still faced complaints. State two possible reasons for HACCP failure in this company and how they could be addressed.

(4 marks)

Question 2

Food labels provide essential information that helps consumers make informed and safe food choices. Understanding how to read and interpret food labels is an important competency in food safety and consumer education.

- (a) Explain five (5) reasons why accurate food labeling is important for consumers and public health. (5 marks)
- (b) A food product lists its ingredients as:
"Wheat flour, sugar, vegetable oil (palm), emulsifier (E322), permitted colouring (E102)."
- i. What does "E322" represent in food labeling? (2 marks)
- ii. Why is the order of ingredients listed in this sequence? (3 marks)
- (c) Describe the key information typically found on a Nutrition Facts panel, and explain why it is useful for individuals with chronic diseases such as hypertension or diabetes. (5 marks)
- (d) A beverage label claims: **"No Added Sugar."**
- i. Explain what this claim means according to food labeling regulations. (2 marks)
- ii. Give three (3) examples of naturally occurring sugars that may still be present in the product. (3 marks)
- (e) Discuss two (2) potential issues with misleading food labels. Provide one (1) real-world example for each issue. (5 marks)

Question 3

Food additives play a significant role in modern food production, helping improve safety, stability, quality, and consumer acceptance. However, inappropriate use or misunderstanding of additives can raise health, regulatory, and ethical concerns.

- (a) Define food additives and provide three reasons why they are commonly used in the food industry.
(5 marks)
- (b) List any three categories of food additives and give one example for each category.
(6 marks)
- (c) Explain the term Acceptable Daily Intake (ADI) and describe why it is important for consumer safety.
(4 marks)
- (d) Food additives can cause concerns among consumers. Describe two possible concerns and explain why they arise.
(4 marks)
- (e) A bakery wants to extend the shelf life of its bread without altering taste or texture. Suggest two suitable additives and justify their functions.
(6 marks)

Question 4

Halal food preparation encompasses not only the permissibility of ingredients but also the processes, handling, equipment, and hygiene standards that ensure food remains permissible according to Islamic law. Understanding these principles helps to maintain food integrity and consumer confidence in Halal-certified products.

- (a) Halal principles must be observed throughout all steps of food preparation to ensure that food remains permissible and free from contamination with non-halal elements. Explain the concept of Halal and Haram in food preparation. Provide two examples of each.
(6 marks)
- (b) Describe two conditions that must be fulfilled for Halal slaughtering (*Dhabihah*) to be valid.
(4 marks)
- (c) Cross-contamination is one of the major concerns in Halal food preparation. Identify two possible sources of cross-contamination and explain how to prevent them.
(6 marks)
- (d) State two requirements for Halal-certified food premises, according to Halal certification standards.
(4 marks)
- (e) A food company plans to produce a new line of Halal-certified ready-to-eat meals. Identify and briefly explain two challenges the company may face during the certification process.
(5 marks)

END OF EXAMINATION PAPER

