



UNIVERSITI KUALA LUMPUR  
INSTITUTE OF MEDICAL SCIENCE TECHNOLOGY

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FINAL EXAMINATION  
MARCH 2025 SEMESTER

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COURSE CODE : HGB30603  
COURSE TITLE : FOOD HYGIENE & TECHNOLOGY  
PROGRAMME NAME : BACHELOR OF ENVIRONMENTAL HEALTH (HONS)  
DATE : 24 JUNE 2025  
TIME : 2:00PM - 5:00PM  
DURATION : 3 HOURS



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INSTRUCTIONS TO CANDIDATES

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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. Answer ALL questions for Section A.
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*

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THERE ARE 16 PAGES OF QUESTIONS INCLUDING THIS PAGE

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**SECTION A (Total: 40 marks)**

**Answer ALL questions.**

**Please use the answer booklet provided.**

1. In the food premises, a one-way food flow design is recommended to \_\_\_\_\_ .
  - A. create more walking space
  - B. increase staff movement
  - C. prevent cross-contamination
  - D. reduce cleaning frequency
  
2. \_\_\_\_\_ is linked with improperly cooled rice.
  - A. Acrylamide
  - B. *Bacillus cereus*
  - C. *E. coli*
  - D. Norovirus
  
3. Identify the situation that require food sampling.
  - I. Surveillance activities to assess food handling practices.
  - II. Response to foodborne outbreak or public complaints.
  - III. Food hygiene inspection to assess hygiene standards and procedures.
  - IV. HACCP verification requirements ensure that physical contamination in food is reduced.
  - A. I and IV only
  - B. I, II and IV
  - C. I, II and III
  - D. II and III only

4. Which of the following would be considered a Critical Control Point (CCP) in sandwich preparation?
  - A. Cooling cooked meat.
  - B. Adding lettuce.
  - C. Cutting the bread.
  - D. Applying mayonnaise.
  
5. How often should food-contact surfaces be sanitized during continuous food preparation?
  - A. After every shift.
  - B. Daily
  - C. Weekly
  - D. Every 4 hours or as needed.
  
6. What is the appropriate cold storage temperature for perishable food?
  - A. -5°C
  - B. 10°C
  - C. 4°C or lower
  - D. 7°C or higher
  
7. A ready-to-eat product is considered unsafe if \_\_\_\_\_.
  - A. is reheated before serving
  - B. is labelled with allergens
  - C. has passed the expiry date
  - D. is kept in a sealed container

8. \_\_\_\_\_ regulates the food labelling and composition in Malaysia.
- A. Environmental Quality Act (1974)
  - B. Food Hygiene Regulation (2009)
  - C. Trade Descriptions Act (2011)
  - D. Food Regulations (1985)
9. Which of the following practices is **NOT** allowed under Halal food preparation guidelines?
- A. Use of utensils washed sertu method.
  - B. Labelling Halal items with a Halal-certified logo.
  - C. Use of alcohol-based hand sanitizers.
  - D. Use of animal-derived ingredients from non-shariah-compliant slaughtering.
10. Which of the following is an acceptable reason for rejecting a food product delivery?
- A. The supplier changed the delivery time.
  - B. The packaging is damaged and temperature is above safe limit.
  - C. The item is out of stock.
  - D. The product is delivered without an invoice.
11. Which of the statements below is **NOT** the duty of an authorized officer in relation to food safety?
- A. An authorized officer examining a person under the subsection shall first inform that person of the provision.
  - B. An authorized officer who performs oral examination is required to produce his Certificate of Authorization.
  - C. Any statement made and recorded under the examination is admissible as evidence in any proceedings in Court.
  - D. In the situation of perishable food seizure, an authorized officer must obtain consent from the owner whose possesses the food at the time of seizure for destruction.

12. The batch number on food packaging is to \_\_\_\_\_ .
- A. indicate discount status of product
  - B. record sales of product
  - C. track product for recall
  - D. retrieve consumer feedback
13. Under Section 2 (2), Food Act 1983, preparation includes\_\_\_\_\_.
- A. manufacture, packaging, processing and any form of treatment
  - B. manufacture, packaging, processing and storing
  - C. manufacture, packaging and processing
  - D. manufacture, processing and other form of treatment
14. A danger of using home-canned food when processing is inadequate is \_\_\_\_\_.
- A. cancer
  - B. excessive nutrient loss
  - C. botulism
  - D. leachate of heavy metal
15. Which of the following is the most important factor in preventing the growth of Listeria in ready-to-eat chilled foods?
- A. Maintaining the cooking temperature above 60°C.
  - B. Strict cold chain management.
  - C. Using vinegar as a food preservative.
  - D. Keeping food at a hot holding temperature before chilling.

16. Which of the following situations demonstrates the correct response by a food service manager to a food safety issue?
- A. The manager allows a staff member with an uncovered hand wound to work in food preparation, provided they wear gloves.
  - B. After a power outage, the manager checks the refrigerator's external temperature and continues operations because it feels cold enough.
  - C. To avoid food waste, the manager instructs staff to reheat leftover soup from the previous day to 60°C before serving.
  - D. Upon receiving a delivery of raw meat at 10°C, the manager rejects the shipment and records the temperature deviation in the receiving log.
17. The statements describe the best practice of food holding, **EXCEPT**:
- A. Food is prepared in large batches.
  - B. Temperature should be probed for at least 6 hours.
  - C. Foods must be kept really hot or really cold.
  - D. Maximum time for hot holding is 4 hours.
18. What should be done if a thermometer used to monitor the critical limit is found inaccurate?
- A. Inform team supervisor.
  - B. Replace or calibrate it immediately.
  - C. Immerse the thermometer in ice.
  - D. Ignore and continue temperature probing.
19. Food premises must have adequate hand washing facilities. Which statement describes the best practice?
- A. Separate sinks are provided for washing hands and equipment.
  - B. Bars of soap and clean roller towels must be available.
  - C. Tissues must be provided at food premises.
  - D. Facilities for washing hands should only be in the rest areas.

20. To prevent food from spoiling in the refrigerator or freezer, which of the following actions is recommended?
- A. Storing the food in a closed container.
  - B. Smelling the food to make sure it is fresh.
  - C. Placing a date of arrival on all foods.
  - D. Ordering foods for a few days at a time only.
21. To ensure spills and food debris are promptly removed during service, which of the following cleaning utility must be available at all stations?
- A. Kitchen tissue
  - B. Sponge
  - C. Paper towel
  - D. Cloth towel
22. What is the **MOST** appropriate action if a food handler has an open wound on their hand?
- A. Continue working as usual.
  - B. Switch to cashier duties.
  - C. Avoid washing hands.
  - D. Cover with clean, waterproof dressing and wear gloves.
23. Which of the following statements is true about facility planning and design?
- A. Chopping boards must be color-coded.
  - B. Walls should have minimal decorations.
  - C. There should be a gap behind the walls for service pipes.
  - D. Stainless steel is recommended for kitchen appliances and worktops to allow easy cleaning.

24. In which type of food is *Staphylococcus aureus* usually found?
- A. Meat
  - B. Starch food
  - C. Canned food
  - D. Undercooked shellfish
25. Which document forms the foundation of a food traceability system?
- A. Cashiering cash flow.
  - B. Packaging label only.
  - C. Batch records and supplier details.
  - D. Allergen warning on the label.
26. The main purpose of the industry guide to Good Manufacturing Practice is to \_\_\_\_\_.
- A. ensure the quality of food management
  - B. lay down rules which must be followed
  - C. provide information on best hygiene practice
  - D. explain the consequence of non-compliance
27. Which of the following describes a feature of pathogens that cause foodborne illness?
- A. Multiply in the body, the infective dose is usually small and they can be transmitted by person-to-person contact.
  - B. The infective dose is usually small, they multiply in the food and can only be transmitted via food.
  - C. Can only be transmitted through food, the infective dose is usually high and they multiply in the body.
  - D. Multiply in the food, can be transmitted from person to person contact and the infective dose is usually small.

28. Verification activities in Hazard Analysis of Critical Control Point (HACCP) should be carried out \_\_\_\_\_ .
- A. only during inspections
  - B. rarely, if records exist
  - C. once per year
  - D. periodically and when changes occur
29. Vitamin C, Vitamin E, Beta Hydroxy Acid (BHA), and sulfites are classified as \_\_\_\_\_.
- A. antioxidants
  - B. pH stabilizer
  - C. coloring agents
  - D. flavor enhancers
30. Which of the following elements in facility design must be easy to clean?
- A. Food-contact surfaces.
  - B. Porous walls.
  - C. Ceiling fans.
  - D. Staff personal lockers.
31. Which area of the food facility is considered a non-critical zone?
- A. Food preparation sink.
  - B. Cutting surface.
  - C. Hand-wash basin.
  - D. Storage shelves for dry goods.

32. What is the **MOST** effective way to prevent foodborne illness caused by viruses?
- A. Control time and temperature.
  - B. Practice good personal hygiene.
  - C. Prevent cross-contamination.
  - D. Practice good cleaning and sanitizing.
33. Which of the following is requirement for Halal certification in Malaysia?
- A. Use of alcohol in flavouring.
  - B. Product contains no dairy.
  - C. Produced only by local workers.
  - D. Use of ingredients certified Halal and free from contamination.
34. World Health Organization (WHO) has outlined FIVE (5) keys to safer food, and one of the components is to keep food at safe temperatures. Which of the following is the **CORRECT** practice for keeping food?
- A. Food in refrigerators can be stored for a longer period.
  - B. Prior to serving, food should be kept hot at 60C.
  - C. Food can be left at room temperature for more than 2 hours.
  - D. Frozen food can be thawed at room temperature before cooking.

35. The food nutrition label below is for tomato-based spaghetti sauce. Identify which of the statements below is **CORRECT** based on the nutrition label.

*Refer Below - Figure 1 : Tomato - based spaghetti sauce nutrition label. .*

| <b>Nutrition facts</b>                               |                      |
|--|----------------------|
| Serving Size 1/2 cup (118g)                          |                      |
| Serving Per Container about 6                        |                      |
| Amount Per Serving                                   |                      |
| <b>Calories</b> 30                                   | Calories from Fat 15 |
| % Daily Value*                                       |                      |
| <b>Total Fat</b> 1.5g                                | <b>2%</b>            |
| Saturated Fat 0g                                     | <b>0%</b>            |
| Trans Fat 0g   | <b>%</b>             |
| <b>Cholesterol</b> 0mg                               | <b>0%</b>            |
| <b>Sodium</b> 330mg                                  | <b>%</b>             |
| <b>Total Carbohydrate</b> 4g                         | <b>1%</b>            |
| Dietary Fiber less than 1gram                        | <b>4%</b>            |
| Sugars 2g  |                      |
| <b>Protein</b> 1g                                    |                      |
| Vitamin A 8%   | • Vitamin C 15%      |
| Calcium 2%   | • Iron 4%            |
| *Percent Daily Values based on a 2,000 calorie diet. |                      |

Ingredients: Imported Italian Tomatoes, Tomato Puree (water, Tomato Paste), Fresh Onions, Olive Oil, Fresh Garlic, Salt, Fresh Basil, Spices, Citric Acid

Figure 1: Tomato - based spaghetti sauce nutrition label.

- A. There is more olive oil than salt in the spaghetti sauce.
- B. The spaghetti sauce contains no fat.
- C. Citric acid acts as emulsifier in the spaghetti sauce.
- D. One container of spaghetti sauce contains three servings of sauces.

36. Which of the following methods is acceptable for safely thawing frozen meat?
- A. In lukewarm water.
  - B. In the refrigerator.
  - C. At the countertop.
  - D. At room temperature.
37. Aflatoxin is identified as a \_\_\_\_\_ hazard in food.
- A. physical
  - B. chemical
  - C. biological
  - D. mechanical
38. Which of the following is the source of cross-contamination in food preparation?
- A. Chill food immediately after cooking.
  - B. Using same glove when handling raw meat and vegetables.
  - C. Serving food on heated plate.
  - D. Using separate chopping boards for cutting meat and fruits.
39. Raw egg is considered a high-risk food because it \_\_\_\_\_ .
- A. easily spoils
  - B. may contain *Salmonella spp.*
  - C. is difficult to store
  - D. causes allergic reactions

40. In a facility layout plan, it is recommended that the receiving area should be located \_\_\_\_\_.
- A. inside the dining room
  - B. at the entrance for easy access
  - C. far from the loading bay
  - D. near to the management office

## SECTION B (Total: 60 marks)

Answer THREE (3) questions only.

Please use the answer booklet provided.

## Question 1

You are evaluating the fried rice production process in a campus kitchen. The following is the food flow:

Refer Below - Figure2 : Food flow of a fried rice. .

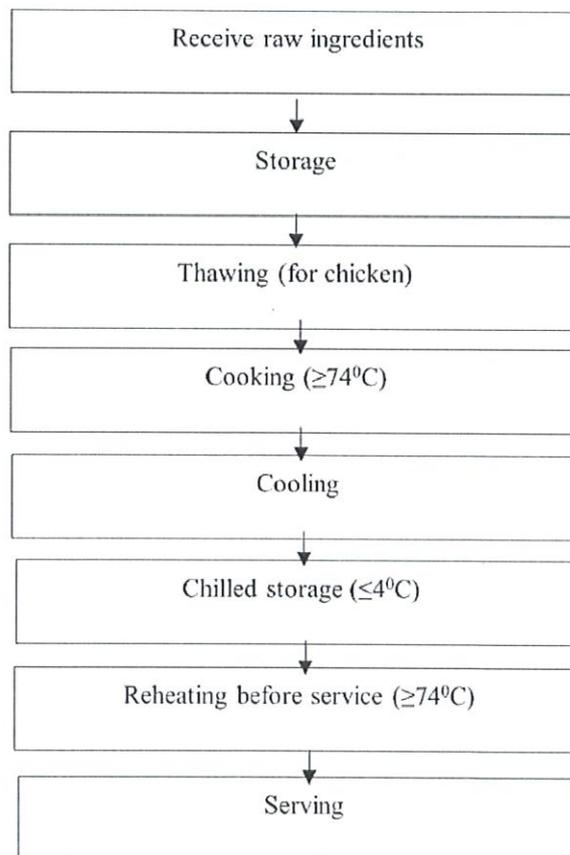


Figure 2: Food flow of a fried rice.

- (a) Evaluate **FOUR (4)** potential hazards that may occur at different process steps and give appropriate examples..

(8 marks)

- (b) Identify and justify **TWO (2)** Critical Control Points (CCPs) based on the food flow. Include the critical limit for each.

(6 marks)

- (c) Recommend **TWO (2)** verification or monitoring strategies to ensure the CCPs stated in (b) are consistently managed.

(6 marks)

### Question 2

A food production plant has implemented a Good Manufacturing Practice (GMP) plan but continues to receive customer complaints about poor hygiene and inconsistent product quality.

- (a) Explain **FIVE (5)** possible weaknesses in the implementation of the GMP system.

(10 marks)

- (b) Suggest **FIVE (5)** improvements based on (a) to strengthen the GMP system.

(10 marks)

### Question 3

You are tasked with designing a basic facility layout for a new ready-to-eat (RTE) meal production site.

- (a) Outline the facility layout requirements that ensure a one-way food flow from raw material receiving to dispatch. Illustrate the layout by including zoning for hygiene and workflow.

(12 marks)

- (b) Explain how your proposed design supports food safety, staff efficiency, and regulatory compliance.

(8 marks)

**Question 4**

You are auditing a food manufacturing company that claims compliance with Halal certification standards. During the inspection, you observe that Halal and non-Halal ingredients are stored in the same chiller without physical segregation.

- (a) Evaluate the **FIVE (5)** potential implications of this situation on the Halal status of food products and consumers.

(10 marks)

- (b) Propose corrective actions that must be implemented to ensure compliance with the MS1500:2019 Halal Standard.

(10 marks)

**END OF EXAMINATION PAPER**

