



UNIVERSITI KUALA LUMPUR
INSTITUTE OF MEDICAL SCIENCE TECHNOLOGY

FINAL EXAMINATION
OCTOBER 2025 SEMESTER

COURSE CODE : HGB30603
COURSE NAME : FOOD HYGIENE & TECHNOLOGY
PROGRAMME NAME : BACHELOR OF ENVIRONMENTAL HEALTH (HONS)
BACHELOR OF BIOMEDICAL SCIENCE (HONOURS)
DATE : 31 JANUARY 2026
TIME : 2.00 PM – 5.00 PM
DURATION : 3 HOURS



INSTRUCTIONS TO CANDIDATES

1. Please **CAREFULLY** read the instructions given in the question paper.
2. This question paper has information printed on both sides of the paper.
3. This question paper consists of **TWO** sections; Section A and Section B.
4. Answer **ALL** questions in Section A.
5. Section B consist of four questions. Answer **THREE (3)** questions only.
6. Please write your answers on OMR and answer booklet provided.
7. Answer all questions in English language **ONLY**.

THERE ARE 16 PAGES OF QUESTIONS, INCLUDING THIS PAGE.

SECTION A (Total: 40 marks)

Answer ALL questions.

Please use the answer booklet provided.

1. _____ means tobacco, cigarette or cigar or any form of tobacco including any mixture containing tobacco which is design for human consumption but excludes any medical product controlled under the poison act 1952 or the Control of Drugs and Cosmetics Regulations 1984.
 - A. Tobacco product
 - B. Tobacco mixture
 - C. Cigarette product
 - D. Tobacco

2. Which of the following statements below is **TRUE** about the facility plan and design of food premises?
 - A. Walls need to have gaps behind them for service pipes.
 - B. Walls should be in optimal decorations.
 - C. Chopping board must be colour-coded.
 - D. Stainless steel is recommended for kitchen appliances and working table tops for easy cleaning.

3. _____ is an illness caused by pathogenic microorganisms that live and grow in your body after eating contaminated food.
 - A. Foodborne infection
 - B. Toxin – mediated infection
 - C. Guillaine- Barre' syndrome
 - D. Foodborne intoxication

4. Environmental Health Practitioners are responsible to enforce food hygiene regulations. Which of the following **DOES NOT** fall under their justification?
- A. The power to seize and detain foods.
 - B. The power to close premises to be put into sanitary condition.
 - C. The power to issue warrant of arrest.
 - D. The power to enter premises at any reasonable time without an appointment.
5. Which statement about *Halal* is **FALSE**?
- A. The food does not contain any ingredients that are filth.
 - B. The food is safe and not harmful.
 - C. Carnivorous animals and birds of prey are permissible.
 - D. The food or its ingredients do not contain any human parts or its derivatives that are not permitted.
6. If you plan on operating a mobile food cart, the best food safety plan is to _____.
- A. determine the food flow diagram
 - B. form a HACCP expert group
 - C. follow the restaurant guidelines
 - D. follow the Good Manufacturing Practice for the mobile food cart
7. Which of the following statements below is **FALSE** about the design of a kitchen wall?
- A. A light-colored finish is recommended to make dirt and contamination more visible, promoting better cleaning practices.
 - B. Joints, corners, and connections between walls, floors, and ceilings should be sealed and seamless.
 - C. Textured or rough walls are acceptable as they add aesthetic value to the kitchen.
 - D. Walls must have a smooth, non-absorbent surface to facilitate easy cleaning and prevent the buildup of dirt and grease.

8. *This bacterium thrives under anaerobic conditions and is capable of forming heat-resistant spores. It is also known as 'cafeteria germ'.*
Which of the following is referring to the above bacteria?
- A. *Escherichia Coli*
 - B. *Compylobacter*
 - C. *Staphylococcus*
 - D. *Clostridium Perfringens*
9. The minimum requirement for the food premises design and construction include all of the statements, **EXCEPT**:
- A. The kitchen should be well - designed to ensure the staff's comfort.
 - B. The premises should provide adequate space for all activities conducted and all equipment to be used or stored.
 - C. The design should allow easy cleaning/sanitizing of all structures and equipment.
 - D. The design and construction of the food premises should be appropriate for the type of food produced and activities conducted.
10. Aflatoxin is identified as _____ food hazard.
- A. physical
 - B. biological
 - C. virus
 - D. chemical

11. Which of the following describes the features of pathogens that cause foodborne illness?
- A. The pathogens can contaminate particular foods.
 - B. Low temperature can kills most of the food pathogens.
 - C. The pathogens can only be transmitted through food, the infective dose is usually high and they multiply in the body.
 - D. Under optimal conditions, some pathogens can multiply rapidly, increasing their numbers and the severity of the infection.
12. Transmitting bacteria to clean food from contaminated work surfaces, hands, utensils, or food is called ____ .
- A. vehicle
 - B. cross-contamination
 - C. vector
 - D. inmate vehicle
13. To avoid foods spoiling in refrigerator or freezer, which of the following action is recommended?
- A. Ordering foods for a few days at a time only.
 - B. Smelling the food to make sure it is fresh.
 - C. Placing the oldest product on top of the new product.
 - D. Placing a date of arrival on all foods.
14. _____ is use to increase the mixture viscosity without modifying the food properties.
- A. Acidulant
 - B. Glazing agents
 - C. Thickeners
 - D. Leavening agents

15. Which pathogen is a concern when consuming unpasteurized dairy products?
- A. Hepatitis A
 - B. *Listeria*
 - C. Norovirus
 - D. *E.coli*
16. What is the **MOST** important way to prevent foodborne illness caused by viruses?
- A. Practice good personal hygiene.
 - B. Control time and temperature.
 - C. Prevent cross-contamination.
 - D. Practice good cleaning and sanitizing.
17. *Bacillus cereus* is commonly found in which type of food?
- A. Meat.
 - B. Undercooked shellfish.
 - C. Canned food.
 - D. Starch food.
18. The main purpose of industry guide to implement Good Manufacturing Practice (GMP) is to _____.
- A. lay down rules which must be followed
 - B. explain the consequence of non-compliance
 - C. ensure the quality of food management
 - D. provide information on best hygiene practice

19. The risk of consuming home-canned food that has been improperly processed is _____.
- A. botulism
 - B. leachate of heavy metal
 - C. excessive nutrient loss
 - D. cancer
20. How should you thaw out meat or poultry from the freezer?
- A. Put it in a bowl of water.
 - B. Thaw it in the oven.
 - C. Leave it on the counter.
 - D. Thaw it in the refrigerator or the microwave.
21. What method is best for ensuring meat is properly cooked?
- A. Use a meat thermometer.
 - B. Cut it open.
 - C. Use a timer.
 - D. Smell the meat.
22. The main reason for not allowing smoking in food preparation areas is because _____.
- A. ashtrays make the kitchen look untidy
 - B. smoking wastes time
 - C. smoke causes cancer
 - D. the fingers become contaminated with saliva

23. What are TCS foods?
- A. Dry goods, breakfast cereals, or pickled foods.
 - B. Foods that can change the pH value.
 - C. Foods that grow bacteria more easily and quickly than other foods.
 - D. Foods that inhibit the growth of pathogens.
24. The growth of bacteria can be prevented by the following methods, **EXCEPT**:
- A. Putting perishable foods in the refrigerator.
 - B. Food were preserved in acid.
 - C. Foods are sealed in air-tight container.
 - D. Cooked food left at room temperature more than 4 hours.
25. Perishable foods can be left out at room temperature for ____ .
- A. more than four hours
 - B. no more than two hours
 - C. unlimited time
 - D. more than 6 hours
26. In order to multiply, most bacteria need ____ .
- A. warm and moist conditions
 - B. acidic environment
 - C. cold and dry conditions
 - D. slightly alkaline environment

27. Which is the **PRIMARY** food safety hazard that causes foodborne illness?
- A. Chemical hazard.
 - B. Biological hazard.
 - C. Allergens.
 - D. Physical hazard.
28. Which of the following groups is less susceptible to foodborne diseases?
- A. Pregnant women.
 - B. People with compromised immune system.
 - C. Adolescents.
 - D. Older individuals.
29. Which temperature is also known as "The danger zone"?
- A. Above 46 °F.
 - B. Between 40 °F and 140 °F.
 - C. More than 160 °F.
 - D. Between 60 °F and 160 °F.
30. Which of the following behavior will introduce the risk of contamination?
- A. Not touching your hair while preparing food.
 - B. Not coughing or sneezing over food.
 - C. Removing loose jewelry before preparing food.
 - D. Smoking while handling food.

31. Which of the following is **NOT** considered a physical hazard?
- A. Blood from raw meat.
 - B. Dead ants.
 - C. Jewelry.
 - D. Glass.
32. Select the reason why food **SHOULD NOT** be stored in galvanized container.
- A. The food will spoil quickly.
 - B. The food can harbor pathogens.
 - C. Acids in the food can leach zinc into the food.
 - D. A galvanized container is not heat-resistant.
33. To avoid any chance of foodborne illness due to fry oil, the optimal changing frequency of fry oil is_____.
- A. every night
 - B. once a month
 - C. every week
 - D. every two days
34. In which of the following situations did the manager of a food service establishment response correctly?
- A. He restricted a cook who had an infected burn to the preparation of desserts.
 - B. He asked an employee who was sneezing and had a runny nose to wear a mask while cooking.
 - C. He assigned a salad worker who had diarrhea to the dishwashing room.
 - D. He provided a clean, dry bandage to a sandwich maker who had an infected cut on her finger so that she can continue working.

35. Food premises must have adequate hand-washing facilities. Which statement describes the **BEST** practice?
- A. Bars of soap and clean roller towels must be available.
 - B. Facilities for washing hands should only be in the rest areas.
 - C. Water should be supplied at a maximum temperature of 8°C.
 - D. Separate sinks for washing hands and equipment.
36. Foods that have a water activity of 0.85 or above are considered _____.
- A. hazardous foods
 - B. perishable foods
 - C. spoiled foods
 - D. not to be refrigerated
37. Which of the following method is an effective way of preventing physical contamination of food?
- A. Inspection
 - B. Filtration
 - C. Segregation
 - D. Scanning
38. Which step poses the highest risk during chicken popcorn preparation?
- A. Stir-frying the coated chicken.
 - B. Coating chicken with flour.
 - C. Heating the oil.
 - D. Preparing the flour and egg mixtures.

39. What is the most appropriate action for food found at 12°C during cold holding?
- A. Add ice cubes.
 - B. Reheat the food.
 - C. Dispose of the food.
 - D. It should be served immediately.
40. A proper food allergen label should be_____ .
- A. hidden beneath the barcode
 - B. written in cursive style
 - C. large and bold
 - D. clearly visible and accurate

SECTION B (Total: 60 marks)

Answer THREE (3) questions only.

Please use the answer booklet provided.

Question 1

Escherichia coli outbreak has been reported and investigation has confirmed that the source comes from the processed meat distributed from Z factory. Recall has been exercised from a few stores selling the product. Having the case as an alert to your meat processing company, you as a Quality Assurance officer have conducted a HACCP control program. As part of the HACCP plan on constructing a process flow, you have identified the critical control points (CCPs).

Outline the process flow of the meat processing and describe the hazards and the preventive measures for every point identified.

(20 marks)

Question 2

A Nutrition Information Panel (NIP) on a food label provides a standardized breakdown of the nutritional content of the product, helping consumers make informed dietary choices.

Examine the Nutritional Information Panel below and answer the subsequent questions.

Refer Below - Figure 1 : Nutrition Information Panel fortomato - based spaghetti sauce .

Product 1

NUTRITION INFORMATION		
SERVINGS PER PACKAGE: 33		
SERVING SIZE: 30g		
	Average Quantity per 30g	Average Quantity per 100g
Energy	447kJ	1490kJ
Protein	3.7g	12.4g
Fat		
- Total	0.4g	1.4g
- Saturated fat	0.1g	0.3g
Carbohydrates		
- Total	20.1g	67.0g
- Sugars	1.0g	3.3g
Dietary Fibre	3.3g	11.0g
Sodium	87mg	290mg
Potassium	102mg	340mg
Ingredients: Whole grain wheat (97%), raw sugar, salt, barley malt extract, minerals (zinc, gluconate, iron), vitamins (niacin, thiamine, riboflavin, folate).		

Product 2

NUTRITION INFORMATION		
SERVINGS PER PACKAGE: 15		
SERVING SIZE: 30g		
	Average Quantity per 30g	Average Quantity per 100g
Energy	481kJ	1603kJ
Protein	1.6g	5.4g
Fat		
- Total	<0.1g	0.3g
- Saturated fat	<0.1g	0.2g
Carbohydrates		
- Total	26.3g	87.7g
- Sugars	11.0g	36.5g
Dietary Fibre	0.4g	1.2g
Sodium	169mg	564mg
Potassium	73mg	243mg
Ingredients: Whole white rice (53%), sugar, cocoa (3%), skim milk powder, salt, whey powder, minerals (calcium carbonate, iron, zinc oxide), flavours, barley malt extract, dextrose, vitamins (vitamin C, niacin, riboflavin, thiamine, folate).		

Figure 1: Nutrition Information Panel fortomato - based spaghetti sauce

- (a) Comparing the two products, which food product is considered as a nutrient-dense food? State your reasons of choosing that particular product.

(9 marks)

- (b) State **TWO (2)** reasons why trans-fatty acids need to be listed in the panel.

(6 marks)

- (c) Determine **TWO (2)** nutrients that are identified as 'Getting enough of these nutrients' from the nutrition information panel.

(5 marks)

Question 3

A confectionery manufacturer is currently pursuing Halal certification for its production facility.

(a) Discuss **FOUR (4)** cross-contamination risks in Halal food processing.
(12 marks)

(b) Explain **FOUR (4)** importance of Halal certification in the food industry.
(8 marks)

Question 4

The Figure below exhibit the arrangement in the kitchen of a restaurant.

Refer Below - Figure2 : Kitchen arrangement in a restaurant. .

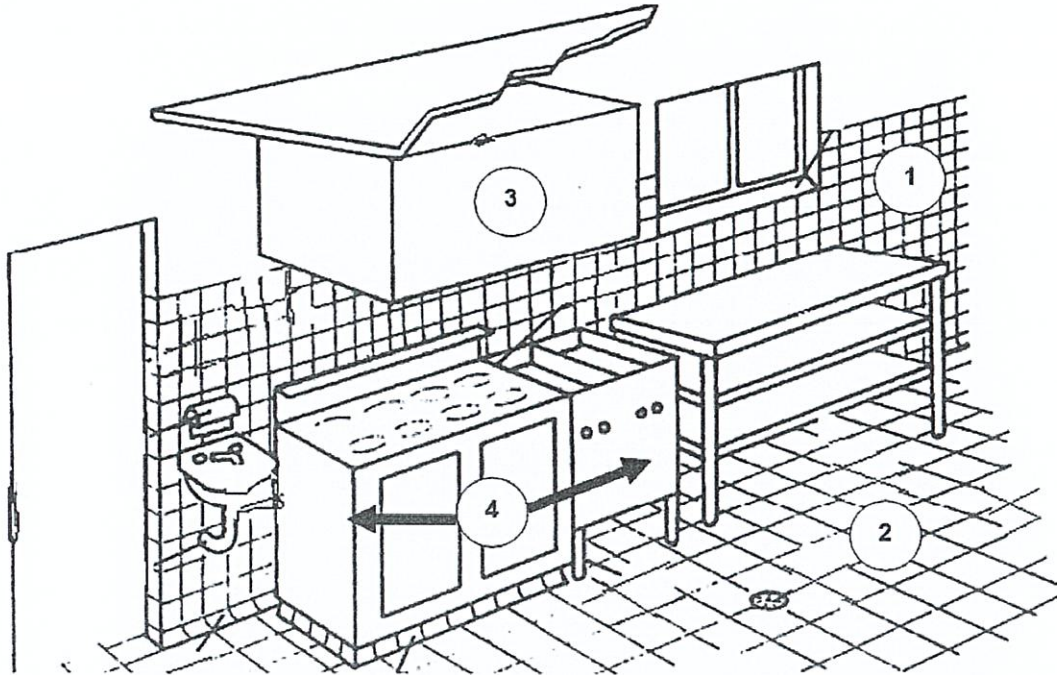


Figure 2: Kitchen arrangement in a restaurant.

- (a) Describe the specific requirements for each structure (marked 1 to 4) to ensure compliance with food safety principles.

(16 marks)

- (b) Illustrate the correct flow of food process through a kitchen.

(4 marks)

END OF EXAMINATION PAPER

