



UNCOVER LEARNER POTENTIAL

WJEC Level 3 Alternative Academic Qualification in
FOOD SCIENCE AND NUTRITION
(Extended Certificate)

Teaching from September 2026

Unit 3 Sample Assessment Materials

Contents

Question paper	1
Mark scheme	18
Mapping grid	42

Surname	Centre number	Candidate number
First name(s)		0

4523UD0-1



**Level 3 Alternative Academic Qualification in
Food Science and Nutrition
(Certificate and Extended Certificate)**

**Unit 3: Principles of food hygiene and food
safety in food production**

1 Hour 30 Minutes

SAMPLE ASSESSMENT MATERIALS

For examiner's use only		
Question	Maximum mark	Mark awarded
1.		
2.		
3.		
4.		
5.		
6.		
7		
8		
9		
10		
11		
12		

For examiner's use only		
Question	Maximum mark	Mark awarded
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
Total		

Instructions to candidates

Use black ink or black ball-point pen. Do **not** use gel pen or correction fluid.
 You may use a pencil for graphs and diagrams only.
 Write your name, centre number and candidate number in the spaces provided at the top of this page.
 Answer **all** questions.
 Write your answers in the spaces in this booklet. If you need more space, use the additional page(s) at the back of this booklet. Number the question(s) correctly.

Information for candidates

The number of marks is given in brackets at the end of each question or part-question.
 The total number of marks available is **80**.
 You should think carefully about how you use your time.
 Your responses must be clear, accurate and well presented.

Section A

Answer **all** questions.

1. Name one group of micro-organism.

[1]

Examiner
only

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2. (a) State what a micro-organism is.

[1]

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- (b) Give one example of where micro-organisms can be found.

[1]

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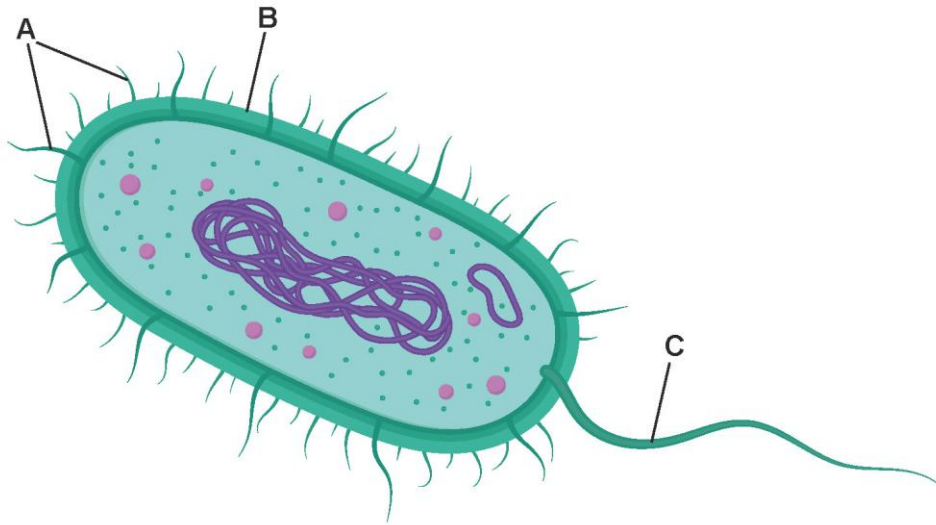
3. State the name given to micro-organisms that can cause harm to humans.

[1]

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4. The below diagram shows the cell anatomy of a bacteria cell.

[3] Examiner only



Correctly name the parts labelled A, B and C.

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5. Norovirus is an example of a virus.

[2]

Describe the structure of a norovirus cell.

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6. Give the temperature ranges for the following:

[3] Examiner only

- Where bacteria are destroyed
- Where bacteria grow quickly
- Where bacteria doesn't grow.

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7. Describe conditions that are required for bacteria to thrive or grow and multiply.

[2]

Do not include optimum temperature in your answer.

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8. (a) Define the term 'food spoilage'.

[1]

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(b) Give one possible cause of food spoilage.

[1]

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9. Explain how enzymes have positively affected the tomatoes shown in the image.

[2]

Examiner
only



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10. Describe how signs of spoilage may present on raw chicken.

[3] Examiner only

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11. (a) Name two methods of preserving food.

[2]

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(b) Explain how one method of preservation prevents microbial growth in food.

[2]

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12. State two main purposes of preserving food.

[2] Examiner only

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13. Give an example of a type of food intolerance.

[1]

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14. State one visible and one non-visible symptom of coeliac disease.

[2]

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15. Name two common foods that cause food allergies.

[2]

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- 16.** Anaphylaxis is a sudden and severe allergic reaction that can be caused by an allergic reaction to a food.

[2] Examiner only

Explain the immunological response to an allergic reaction from peanuts.

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- 17.** Explain how monitoring critical control points ensures a safe working environment.

[2]

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18. You are the manager of a busy fast-food restaurant that serves a variety of items, including burgers, fries and milkshakes. The kitchen operates with several staff members working in close quarters during peak hours, especially during lunch and dinner rushes.

[4]

Recently, you've noticed some concerning practices that could pose food safety risks.

1. Food preparation area:
 - The raw meat for burgers is stored in the fridge above fresh vegetables.
 - Staff use the same chopping board for raw chicken and vegetables without proper cleaning in-between.
2. Cleaning and hygiene:
 - One of the fryers has not been cleaned for an extended period.
 - The handwashing station is located at the back of the kitchen, and employees often skip washing their hands due to the position of the station.
3. Temperature control:
 - Employees have observed the fridge, used for storing milkshake ingredients, reach above 8°C.

Explain how **two** of these practices could lead to contamination or foodborne illness.

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19. A family dining at the restaurant becomes ill after consuming undercooked chicken, which had not reached the correct cooking temperature due to a busy kitchen. Hours later, they experience severe stomach cramps and diarrhoea, and they are diagnosed by their doctor as having food poisoning caused by Salmonella.

[6] Examiner only

Complete the table below, giving two implications of food poisoning to each group.

The first row has been completed for you.

Consumers	Business owners	Employees working for the business
<i>Having to experience an illness.</i>	<i>Possible closure of business by EHO.</i>	<i>Prosecution if proven they did not follow health and safety regulations.</i>

Section B

Answer **all** questions.

- 20.** A company has been hired to provide a buffet for a wedding reception at a historic venue with a charming, yet small kitchen. They have been tasked with serving a variety of dishes to 150 guests, including gourmet salads, roasted chicken, vegetarian pasta, and a dessert table with pastries and cakes. With limited counter space and cooking capacity, they must carefully plan their workflow to ensure all food is prepared and served safely.

[9]

Examiner
only

Efficient use of space and proper timing for food preparation will be crucial to adhere to food safety standards. They also need to be vigilant about preventing cross-contamination and ensuring that all dishes are served at the correct temperatures.

Explain the potential hazards involved with working in this environment and any actions that could reduce the potential risk involved.

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- 21.** A local café has recently overstocked on fresh fruits and vegetables that need to be preserved to prevent spoilage. The café owner is considering several options for preservation, including refrigeration, freezing, drying, canning, pickling and fermentation.

[6]

Examiner
only

Evaluate the effectiveness of these preservation methods in preventing the growth of micro-organisms and extending the shelf life of the produce. Your response should include how each method impacts the freshness, flavour, and safety of the fruits and vegetables.

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- 22.** You are the manager of a local grocery store that prides itself on offering a wide range of products, including packaged foods, fresh produce and baked goods. Recently, there has been an increase in customer inquiries regarding food allergies and intolerances, particularly concerning the labelling of food products.

[6]

Examiner
only

One day, a customer with a severe nut allergy approaches you after noticing that several packaged snacks do not have clear allergen warnings. They express concern about accidentally consuming a product that may contain traces of nuts, which could lead to a severe allergic reaction.

Discuss why it is important that food content is clearly labelled in regard to food allergies.

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Section C

Answer **all** questions.

- 23.** Celtic Catering is a new food truck company run by Amy and Jake. They plan to serve both hot and cold food at outdoor events such as festivals, fairs and sports events. Their menu will include gourmet sandwiches, salads, and hot street foods like tacos, burgers and fries. Before starting their business, Amy and Jake must ensure their food truck complies with food hygiene regulations to maintain safety and avoid health or legal issues.

Examiner
only

They need to think about correct temperature control, food storage, personal hygiene, cleaning routines and preventing cross-contamination. They also need to ensure all staff are trained in food safety and that the truck passes food safety inspections.

- (a) Amy and Jake will be serving both hot and cold food however, all products are prepared from fresh vegetables and raw meat every morning. [1]

State the safe temperature ranges for storing these foods.

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- (b) Explain how they should store their raw ingredients and cooked food within a confined space to ensure safety. [4]

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- (c) Amy and Jake will be working with two additional staff members during events.

[2]

Examiner
only

Explain the personal hygiene standards that all staff must follow to ensure food safety.

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- (d) Amy and Jake are preparing to open their new food truck, and they want to ensure their business operates efficiently while maintaining food hygiene standards during a busy festival.

[6]

Evaluate the strategies they could implement to operate efficiently and ensure food safety, considering factors such as temperature control, cross-contamination and staff management.

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END OF QUESTIONS

MARK SCHEME

Guidance for examiners

Generic marking principles

- Marks awarded are always whole marks (not half marks, or other fractions).
- Answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.
- Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).
- Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Positive marking

It should be remembered that candidates are writing under examination conditions and credit should be given for what the candidate writes, rather than adopting the approach of penalising candidates for any omissions. It should be possible for a very good response to achieve full marks and a very poor one to achieve zero marks. Marks should not be deducted for a less than perfect answer if it satisfies the criteria of the mark scheme.

For questions that are objective or points-based, the mark scheme should be applied precisely. Marks should be awarded as indicated and no further subdivision made.

Mark schemes often list points which may be included in candidates' answers. The list is not exhaustive. The inclusion of '*Credit any other valid response.*', or similar instruction, within mark schemes allows for the possible variation in candidates' responses. Credit should be given according to the accuracy and relevance of candidates' answers.

Appropriate terminology is reflected in exemplar responses in mark schemes. However, unless there is a specific requirement within a question, candidates may be awarded marks where the answer is accurate but expressed in their own words.

Banded mark schemes

For band marked questions mark schemes are in two parts: the indicative content and the assessment grid.

The indicative content suggests the range of points and issues which may be included in candidates' answers. It can be used to assess the quality of the candidate's response. As noted above, indicative content is not intended to be exhaustive, and candidates do not have to include all the indicative content to reach the highest level of the mark scheme.

However, to reach the highest level of the mark scheme a candidate must meet the requirements of the highest mark band. Where a response is not creditworthy, that is, it contains nothing of any significance to the mark scheme, or where no response has been provided, no marks should be awarded.

The marking of banded mark questions should always be positive. This means that, for each candidate's response, marks are accumulated for the demonstration of relevant skills, knowledge and understanding they are not deducted from a maximum on the basis of errors or omissions.

Examiners should first read and annotate the candidate's answer to pick out the evidence that is being assessed in that question. The mark scheme can then be applied. This is done as a two-stage process.

Stage 1 – Deciding on the band

Beginning at the lowest band, examiners should look at the candidate's answer and check whether it matches the descriptors for that band. If the descriptors at the lowest band are satisfied, examiners should move up to the next band and repeat this process for each band until the descriptors most closely matches the work.

Stage 2 – Deciding on the mark

Having determined the appropriate band, deciding on the mark within a band will be made on the basis of a 'best fit' procedure, weaknesses in some areas being compensated for by strengths in others.

Examiners should use the full range of marks available to them. Marking should be positive, rewarding achievement rather than penalising failure or omissions. The awarding of marks must be directly related to the marking criteria, and all responses must be marked according to the banded levels provided for each question.

Standardising material that has already been awarded a mark will be provided during standardising and this should be used as reference material when assessing work. Examiners are reminded of the need to revisit the standardising material as they apply the mark scheme in order to confirm that the band and the mark allocated is appropriate to the work submitted.

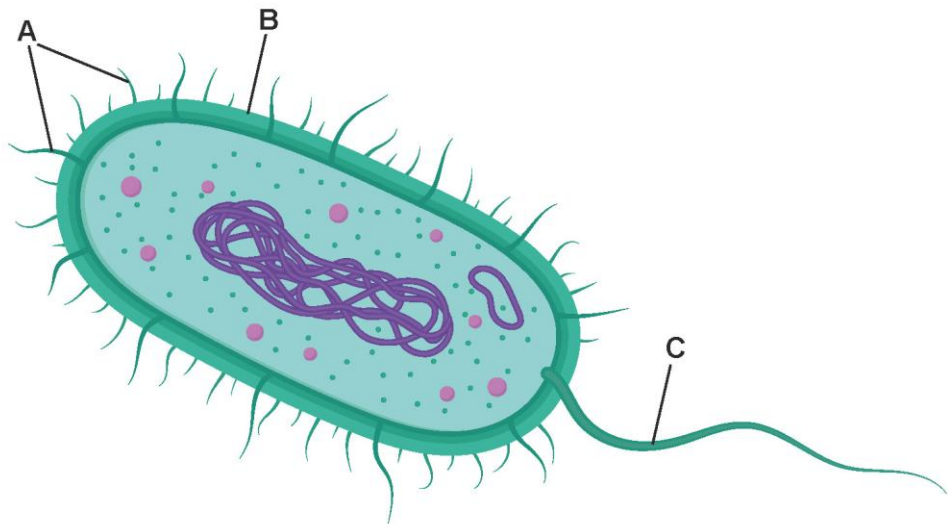
This mark scheme instructs examiners to look for and reward valid alternatives where indicative content is suggested for an answer. This is not a checklist for expected content in an answer, or set out as a 'model answer', as responses must be marked in the banded levels of response provided for each question. Where a candidate provides a response that contains aspects or approaches not included in the indicative content, examiners should use their professional judgement to determine the validity of the response in light of the task and reward as directed by the bands. Candidates are free to choose any approach that is relevant to the set task. Candidates can, and will most likely, incorporate ideas other than those mentioned in the mark scheme.

Section A

Question	Answer	AO1	AO2	AO3	Total Mark
1.	Name one group of micro-organisms.				
	Award one mark for a correct response. Yeast (1) Mould (1) Bacteria (1) Credit any other relevant response.	1			1

Question	Answer	AO1	AO2	AO3	Total Mark
2.	(a) State what a micro-organism is.				
	Award one mark for a correct response. Micro-organisms are tiny living organisms that can influence food safety, spoilage or food production processes (1). Credit any other relevant response.	1			1
	(b) Give one example of where micro-organisms can be found.				
	Award one mark for a correct answer. • soil • water • sewage • dust • dirt • on surfaces and equipment • in the air • in and on people • animals • birds and insects • on clothes • in food and food packaging • in rubbish. Credit any other relevant response.	1			1

Question	Answer	AO1	AO2	AO3	Total Mark
3.	State the name given to micro-organisms that can cause harm to humans.				
	Award one mark for a correct response.	1			1
	Pathogen (1)				
	Credit any other relevant response.				

Question	Answer	AO1	AO2	AO3	Total Mark
4.	The below diagram shows the cell anatomy of a bacteria cell.				
	Correctly name the parts labelled A, B and C.				
					
	Award one mark for each correct label.	3			3
	A: Pilus B: Capsule C: Flagellum				

Question	Answer	AO1	AO2	AO3	Total Mark
5.	Norovirus is an example of a virus. Describe the structure of a norovirus cell.				
	Award one mark for each descriptive point, up to a maximum of two marks. Norovirus has a simple structure made up of a protein shell called a capsid that doesn't have an outer envelope (1). Inside the capsid, it contains single-stranded RNA (ssRNA), which is its genetic material, and the surface of the capsid has proteins that help the virus attach to and infect host cells (1). Credit any other relevant response.	2			2

Question	Answer	AO1	AO2	AO3	Total Mark
6.	Give the temperature ranges for the following: - Where bacteria are destroyed - Where bacteria grow quickly - Where bacteria doesn't grow.				
	Award one mark for each correct response. Where bacteria is destroyed: 60°C and above Where bacteria grow quickly: 5°C - 60°C Where bacteria doesn't grow: -18°C - 0°C Credit any other suitable response	3			3

Question	Answer	AO1	AO2	AO3	Total Mark
7.	Describe conditions that are required for bacteria to thrive or grow and multiply. Do not include optimum temperature in your answer.				
	Award one mark for each descriptive point, up to a maximum of two marks. - Bacteria require a moist environment to multiply. Foods with a higher water content, such as raw meats or dairy, provide ideal conditions (1). - Bacteria need nutrients like proteins, fats and carbohydrates to grow. Foods rich in these nutrients, such as meat and dairy, are suitable for bacterial growth (1). - Bacteria thrive in a neutral to slightly acidic environment, around pH 6-7 and most bacteria do not grow in highly acidic or highly alkaline conditions (1). - Some bacteria need oxygen to grow, while others thrive in oxygen-deprived environments (1). Credit any other relevant response.	2			2

Question	Answer	AO1	AO2	AO3	Total Mark
8.	(a) Define the term 'food spoilage'.				
	Award one mark for a correct definition. Food spoilage is defined as food that is unfit and unsafe to eat. Credit any other relevant response.	1			1
	(b) Give one possible cause of food spoilage.				
	Award one mark for a correct cause of spoilage. - Enzymes: the process of ripening and decomposition. - Micro-organisms: bacteria, moulds, yeasts, viruses. - Pests: where insects or animals cause spoilage or contamination, they may lay eggs which transfer bacteria. - Physical spoilage is where food has been spoiled by bruising, freezer burn or dampness. - Oxidation: rancidity Credit any other relevant response.	1			1

Question	Answer	AO1	AO2	AO3	Total Mark
9.	Explain how enzymes have positively affected the tomatoes shown in the image. 				
	Award one mark for each explanation point, up to a maximum of two marks. - Enzymes are protein substances that act as catalysts and speed up chemical reactions in plants and animals (1). This chemical reaction develops and matures the colour, flavour, aroma and texture of food (1). - The enzymes in the tomatoes have changed colour due to the ripening process (1). The enzymes have made the tomatoes become gradually sweeter as the starch they contain is broken down into smaller sugar molecules (1). Credit any other relevant response.		2		2

Question	Answer	AO1	AO2	AO3	Total Mark
10.	Describe how signs of spoilage may present on raw chicken.				
	Award one mark for each descriptive point, up to a maximum of three marks. - Visual signs such as, changes in the appearance of the chicken, discolouration from its usual pink colour, normally green (1). - Visible white coloured spots indicating colonies containing millions of individual bacteria (1). - There may be an abnormal smell that is stronger than the typical smell of fresh chicken (1). - Texture changes such as the surface becoming slimy or sticky (1). Credit any other relevant response.		3		3

Question	Answer	AO1	AO2	AO3	Total Mark
11.	(a)	Name two methods of preserving food.			
		Award one mark for each correct answer, up to a maximum of two marks.			
		2			2
		• Vacuum sealing • Refrigeration • Smoking • Salting • Canning • Pasteurisation			
		Credit any other relevant response.			
	(b)	Explain how one method of preservation prevents microbial growth in food.			
		Award one mark for each explanation point, up to a maximum of two marks.			
			2		2
		Salting draws water out of the food and micro-organisms through osmosis, creating an environment with low water activity (1). Micro-organisms cannot survive or grow without sufficient water to carry out their life processes (1). Canning involves heating food to high temperatures, which kills microorganisms (1). The food is then sealed in an airtight container, preventing any new micro-organisms from entering and growing (1). Pasteurisation involves heating food to a specific temperature for a specific amount of time, which kills most harmful micro-organisms (1). The food is then rapidly cooled to prevent any surviving bacteria from reproducing (1).			
		Credit any other relevant response.			

Question	Answer	AO1	AO2	AO3	Total Mark
12.	State two main purposes of preserving food.				
	Award one mark for a correct answer. - Extend the shelf life of food - Prevent food waste and spoilage - Maintain the quality of the food, texture and flavour - Maintain the nutritional value of the food - Prevent or slow down the growth and reproduction of any micro-organisms - Destroy any micro-organisms that have already contaminated food (only allow this answer if linked with heating, dehydration, pickling, chemical preservatives).	2			2
	Credit any other relevant response.				

Question	Answer	AO1	AO2	AO3	Total Mark
13.	Give an example of a type of food intolerance.				
	Award one mark for a correct answer. - Lactose - Phenylketonuria (PKU) - Salicylic acid - Caffeine - Monosodium glutamate (MSG) - Coeliac disease.	1			1
	Credit any other relevant response.				

Question	Answer	AO1	AO2	AO3	Total Mark
14.	State one visible and one non-visible symptom of coeliac disease.				
	Award one mark for a visible symptom. Mouth ulcers, skin rash, diarrhoea, sudden weight loss, anaemia, nerve problems: loss of co-ordination/balance, problems with tooth enamel, vomiting, miscarriage, bloating.	2			2
	Award one mark for a non-visible symptom. Depression, tiredness, lethargic, liver problems, flatulence and/or constipation, nerve problems: tingling/numbness, osteoporosis, abdominal pain, cramp, nausea.				
	Credit any other relevant response.				

Question	Answer	AO1	AO2	AO3	Total Mark
15.	Name two common foods that cause food allergies.				
	Award one mark for a correct food type. • Celery • Cereals, that contain gluten • Crustaceans • Eggs • Fish • Lupin • Milk • Molluscs • Mustard • Tree nuts • Peanuts (groundnuts) • Sesame seeds • Soya beans • Sulphur dioxide/Sulphites Credit any other relevant response.	2			2

Question	Answer	AO1	AO2	AO3	Total Mark
16.	Anaphylaxis is a sudden and severe allergic reaction that can be caused by an allergic reaction to a food.				
	Explain the immunological response to an allergic reaction from peanuts.				
	Award one mark per explanation point, up to a maximum of two marks. When a person with a peanut allergy consumes peanuts for the first time, their immune system produces specific IgE (immunoglobulin E) antibodies that attach to mast cells (1). Upon subsequent exposure, these antibodies trigger mast cells to produce histamine, causing symptoms such as swelling, hives and difficulty breathing (1). Credit any other relevant response.		2		2

Question	Answer	AO1	AO2	AO3	Total Mark
17.	Explain how monitoring critical control points ensures a safe working environment.				
	Award one mark for each explanation point, up to a maximum of two marks. Critical control points are key stages in a process where hazards could occur, like temperature control during cooking (1). Monitoring critical control points ensures that key stages in food production, such as storage of food, are maintained within safe limits to prevent or reduce the hazard from occurring, such as bacterial growth (1). Regularly monitoring these points helps to identify risks early, and allows for corrective actions to be taken, such as adjusting temperatures, which ensures a safe working environment (1). Credit any other relevant response.		2		2

Question	Answer	AO1	AO2	AO3	Total Mark
18.	You are the manager of a busy fast-food restaurant that serves a variety of items, including burgers, fries and milkshakes. The kitchen operates with several staff members working in close quarters during peak hours, especially during lunch and dinner rushes. Recently, you've noticed some concerning practices that could pose food safety risks. - Food preparation area: - The raw meat for burgers is stored in the fridge above fresh vegetables. - Staff use the same chopping board for raw chicken and vegetables without proper cleaning in-between. - Cleaning and hygiene: - One of the fryers has not been cleaned for an extended period. - The handwashing station is located at the back of the kitchen, and employees often skip washing their hands due to the position of the station. - Temperature control: - Employees have observed the fridge used for storing milkshake ingredients, to reach above 8°C. Explain how two of these practices could lead to contamination or foodborne illness.				
	Award one mark for each explanation point, up to a maximum of two marks per risk. Storing raw meat above fresh vegetables in the fridge can lead to cross-contamination. If the raw meat leaks or drips, harmful bacteria such as Salmonella or E. Coli can contaminate the vegetables (1). Consuming contaminated vegetables can result in foodborne illness, posing serious health risks to customers (1). Using the same chopping board for raw chicken and vegetables without proper cleaning in-between can lead to cross-contamination, if the chopping board is used for raw meat before the vegetables (1). Not cleaning the fryer for an extended period can lead to a buildup of harmful residues and bacteria. If food is cooked in this contaminated fryer, harmful pathogens may transfer to the food, increasing the risk of foodborne illnesses for customers (1). This negligence can also contribute to off flavours in the food, impacting overall quality (1). Employees skipping the handwashing process, even once, poses an increased risk of growth and spread of bacteria, which could lead to contamination of food (1). If the fridge for storing milkshake ingredients exceeds 8°C, it creates an environment where bacteria can multiply rapidly.		4		4

	Ingredients like milk and cream are high-risk foods and are particularly susceptible to spoilage at higher temperatures (1). If these contaminated ingredients are used, they can cause foodborne illnesses, such as gastrointestinal infections, for those consuming the milkshakes (1).				
	Credit any other relevant response.				

Question	Answer	AO1	AO2	AO3	Total Mark												
19.	A family dining at the restaurant becomes ill after consuming undercooked chicken, which had not reached the correct cooking temperature due to a busy kitchen. Hours later, they experience severe stomach cramps and diarrhoea, and they are ultimately diagnosed with food poisoning caused by Salmonella. Complete the table below, giving two implications of food poisoning to each group. The first row has been completed for you. <table><tr><th>Consumers</th><th>Business owners</th><th>Employees working for the business</th></tr><tr><td><i>Having to experience an illness.</i></td><td><i>Possible closure of business by EHO.</i></td><td><i>Prosecution if proven they did not follow health and safety regulations.</i></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>	Consumers	Business owners	Employees working for the business	<i>Having to experience an illness.</i>	<i>Possible closure of business by EHO.</i>	<i>Prosecution if proven they did not follow health and safety regulations.</i>										
Consumers	Business owners	Employees working for the business															
<i>Having to experience an illness.</i>	<i>Possible closure of business by EHO.</i>	<i>Prosecution if proven they did not follow health and safety regulations.</i>															
Award one mark for each correct implication given, up to a maximum of two marks per category. Consumers: Loss of pay due to sick leave (1) May require additional medical treatment (1) Physical health risks, such as developing long-term health issues (1) Business Owners: Loss of reputation (1) Legal consequences (1) Increased scrutiny from regulators (1) Increased operation costs to improve practice (1) Employees working for the business Loss of job and/or earnings (1) Requirement to undergo further training (1) Increased monitoring and stricter compliance (1) Credit any other relevant response.			6		6												

Section B

Question	Answer	AO1	AO2	AO3	Total Mark
20.	A company has been hired to provide a buffet for a wedding reception at a historic venue with a charming, yet small kitchen. They have been tasked with serving a variety of dishes to 150 guests, including gourmet salads, roasted chicken, vegetarian pasta, and a dessert table with pastries and cakes. With limited counter space and cooking capacity, they must carefully plan their workflow to ensure all food is prepared and served safely. Efficient use of space and proper timing for food preparation will be crucial to adhere to food safety standards. They also need to be vigilant about preventing cross-contamination and ensuring that all dishes are served at the correct temperatures. Explain the potential hazards involved with working in this environment and any actions that could reduce the potential risk involved.				
	<u>Potential hazards</u> Overcrowding and obstruction - Multiple people working in a small kitchen can lead to accidental bumping or obstruction of access to emergency exits or essential equipment. - Spilled liquids or grease on the floor can lead to slips, especially in a confined space where manoeuvring is tight. Improper food handling - Risk of cross-contamination when staff handle raw and cooked foods without washing hands or changing gloves in-between tasks. - Example: Using the same chopping board for raw meat and fresh vegetables can transfer harmful bacteria. Shared utensils and equipment - Using the same utensils for different food items without proper cleaning can lead to contamination. - Example: A knife used to cut raw chicken could contaminate bread for sandwiches. Inadequate labelling - Foods displayed at the buffet may not have been labelled correctly in the kitchen, increasing the risk of guests unknowingly consuming allergens. - Example: A dish containing nuts may not be labelled, putting guests with nut allergies at risk. Improper storage practices - Storing raw ingredients above cooked foods in the fridge can lead to drips or spills, contaminating ready-to-eat items.		9		9

	• Example: Raw meat juices leaking onto vegetables stored below can introduce pathogens. <u>Actions to reduce risks</u> Overcrowding and obstruction • Limit the number of people in the kitchen at one point, where possible, and use other suitable spaces for other preparation activity. Implement strict handwashing protocols • Train staff to wash hands thoroughly and frequently, especially when switching between handling raw and cooked foods. Use colour-coded utensils • Introduce a colour-coded system for chopping boards and utensils to clearly separate raw and cooked foods. Establish clear labelling procedures • Ensure all dishes at the buffet are clearly labelled with ingredients, particularly allergens, to inform guests and reduce the risk of allergic reactions. Maintain proper storage practices • Follow guidelines for food storage by keeping raw foods on the bottom shelves of the fridge and cooked foods above to prevent contamination. Conduct regular staff training • Provide ongoing training for staff on food safety practices, including cross-contamination prevention and the importance of proper labelling. Conclusion Responses should conclude with the significance of adhering to food safety practices, particularly in a small kitchen setting, to protect both guests and the reputation of the catering business.				
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Band	AO2
3	7-9 marks A good response which demonstrates: • A thorough identification of multiple potential hazards associated with cross-contamination during the buffet preparation in a small kitchen, including specific risks. • Detailed explanations of how cross-contamination can occur, such as using the same utensils for raw and cooked foods, improper food storage, and inadequate labelling of products displayed to guests. • Clear and practical actions that can be implemented to reduce the risk of cross-contamination, demonstrating an understanding of food safety regulations and best practices (e.g., using color-coded utensils, separate storage for raw ingredients, and clearly labelling food items with allergens). • A well-organised response that shows logical connections between hazards, risk reduction strategies, and the importance of product labelling for guest safety.
2	4-6 marks A basic response which demonstrates: • Some identification of potential cross-contamination hazards, but lacks depth or specificity in explanations (e.g., only mentioning general food safety risks). • General actions mentioned for reducing the risk of cross-contamination and ensuring proper labelling, though they may not fully address all identified hazards (e.g., basic mention of handwashing or cleaning surfaces without specific examples of labelling). • An organised response but may lack clarity in linking hazards to risk reduction strategies. • Limited examples or details provided to support the points made.
1	1-3 marks A limited response which demonstrates: • Minimal identification of cross-contamination hazards, with few or vague examples mentioned (e.g., only referring to "keeping food separate"). • Little or no detail on actions that can reduce risks, including labelling, showing a lack of understanding of safety protocols (e.g., failing to provide specific strategies for labelling or cross-contamination prevention). • Disorganised response that is difficult to follow, with unclear connections between hazards and mitigation strategies. • Very few, if any, relevant examples or explanations included.
0	No response attempted or nothing worthy of credit.

Question	Answer
21.	A local café has recently overstocked on fresh fruits and vegetables that need to be preserved to prevent spoilage. The café owner is considering several options for preservation, including refrigeration, freezing, drying, canning, pickling, and fermentation. Evaluate the effectiveness of these preservation methods in preventing the growth of micro-organisms and extending the shelf life of the produce. Your response should include how each method impacts the freshness, flavour, and safety of the fruits and vegetables.
Indicative Content	
Refrigeration • Effectiveness: Slows down the growth of micro-organisms by lowering temperatures, generally keeping them below 5°C. • Impact on freshness and flavour: Maintains the texture and nutritional quality of fruits and vegetables for a longer time. However, prolonged refrigeration can lead to moisture loss and wilting in some produce. • Safety: Reduces the risk of spoilage and foodborne illnesses, but doesn't kill micro-organisms, so proper cleaning is still essential. Freezing • Effectiveness: Stops the growth of micro-organisms completely by lowering temperatures to -18°C or lower. • Impact on freshness and flavour: Retains most nutrients if done correctly (e.g., blanching vegetables), but texture may change when thawed due to ice crystal formation. • Safety: Very effective in preventing spoilage; however, if thawed improperly, there is a risk of bacterial growth. Drying (Dehydration) • Effectiveness: Removes moisture, inhibiting the growth of bacteria, yeasts and moulds. • Impact on freshness and flavour: Concentrates flavour but alters texture (e.g., soft fruits become chewy). Nutritional content can be retained if done correctly. • Safety: Long shelf life if properly sealed, but there is a risk of bacteria growth and spoilage if moisture is in contact with the food. Canning • Effectiveness: Heat treatment kills micro-organisms, and vacuum sealing prevents new contamination. • Impact on freshness and flavour: Preserves most nutrients, but some sensitive vitamins may be lost during the heating process. Texture can change. • Safety: Very effective if done correctly; however, there is a risk of botulism if proper canning methods are not followed. Pickling • Effectiveness: High acidity or salt content inhibits the growth of harmful bacteria. • Impact on freshness and flavour: Alters the taste (adds tanginess) and extends shelf life but changes the texture of the produce. • Safety: Can create a safe product if done properly; however, improper pH levels can pose safety risks.	

Fermentation

- **Effectiveness:** Beneficial bacteria outcompete harmful micro-organisms, creating an acidic environment that prevents spoilage.
- **Impact on freshness and flavour:** Enhances flavour and adds nutritional benefits (probiotics), but the texture may change.
- **Safety:** Generally safe if done correctly, but poor fermentation can lead to spoilage.

Conclusion

- Each preservation method has its own advantages and disadvantages regarding effectiveness, impact on freshness and flavour, and safety.
- The choice of preservation method may depend on the type of produce, intended use and desired shelf life.
- A comprehensive evaluation considers not just the method's ability to prevent microbial growth but also how it affects the overall quality of the food.

Band	AO3
	5-6 marks
3	A good response which demonstrates: • A comprehensive evaluation of multiple preservation methods (e.g., refrigeration, freezing, drying, canning, pickling, fermentation). • In-depth analysis of how each method effectively prevents the growth of micro-organisms and extends the shelf life of produce. • Clear insights into the impact of preservation methods on the freshness and flavour, and safety of fruits and vegetables. • Relevant examples or scientific principles that support the arguments made. • A well-structured conclusion that logically follows from the analysis.
2	3-4 marks A basic response which demonstrates: • A satisfactory evaluation of some preservation methods with limited depth. • General analysis of how these methods help in preventing microbial growth and extending shelf life. • Some consideration of the impact on freshness and flavour, and safety, though it may lack thorough exploration. • Basic reasoning or justification for conclusions drawn but may not be well-supported by specific examples.
1	1-2 marks A limited response which demonstrates: • Identification of one or two preservation methods with minimal evaluation. • Little, or no analysis of how these methods prevent microbial growth or extend shelf life. • Inadequate consideration of the impact on freshness and flavour, and safety. • Weak justification for any conclusions made, often consisting of vague or unsupported statements.
0	No response attempted or nothing worthy of credit.

Question	Answer
22.	You are the manager of a local grocery store that prides itself on offering a wide range of products, including packaged foods, fresh produce, and baked goods. Recently, there has been an increase in customer inquiries regarding food allergies and intolerances, particularly concerning the labelling of food products. One day, a customer with a severe nut allergy approaches you after noticing that several packaged snacks do not have clear allergen warnings. They express concern about accidentally consuming a product that may contain traces of nuts, which could lead to a severe allergic reaction. Discuss why it is important that food content is clearly labelled in regard to food allergies.
Indicative Content	
Consumer safety: • Clear labelling helps individuals with food allergies make informed choices, reducing the risk of accidental exposure to allergens. • Precise allergen information allows consumers to avoid products that could trigger severe allergic reactions, such as anaphylaxis. Legal compliance: • Food labelling laws and regulations require food manufacturers to disclose allergens clearly. Compliance with these regulations protects consumers and manufacturers from legal repercussions. • Failing to provide accurate allergen information can result in recalls, fines and lawsuits. Public health: • Clear labelling contributes to overall public health by minimising the incidence of allergic reactions, which can strain healthcare resources. • Educating consumers about allergens through labelling, promotes awareness and understanding of food allergies within the community. Building trust: • Transparency in food labelling fosters trust between consumers and food manufacturers/retailers. When customers feel confident in the information provided, they are more likely to purchase from that brand or store. • Clear communication about allergen information enhances the brand's reputation and customer loyalty. Emergency preparedness: • In the event of an allergic reaction, clear labelling can provide critical information for medical professionals regarding potential allergens consumed. • Properly labelled food products can aid first responders in assessing and treating allergic reactions quickly and effectively. Consequences of poor labelling • Unclear or misleading labels can lead to serious health risks, including severe allergic reactions or even death. • High-profile incidents of food recall due to mislabelling can damage a brand's reputation and consumer confidence.	

Conclusion

- Clear food labelling regarding allergens is crucial for protecting consumers, ensuring compliance with legal standards, promoting public health, and fostering trust between consumers and food producers.
- Businesses have a responsibility to prioritise safety through accurate and comprehensive labelling practices, ultimately enhancing consumer awareness and safety in food choices.

Band	AO3
	5-6 marks
3	A good response which demonstrates: • A comprehensive understanding of the importance of clear food labelling concerning food allergies. • In-depth discussion of the potential consequences of unclear labelling, including severe allergic reactions, health risks, and the impact on quality of life for individuals with food allergies. • Consideration of legal and ethical responsibilities of food producers and retailers to ensure consumer protection.
2	3-4 marks A basic response which demonstrates: • A general understanding of the importance of clear food labelling in relation to food allergies. • Some discussion of the potential consequences of unclear labelling, but lacking depth or detail. • Basic acknowledgment of the responsibilities of food producers but may not elaborate on the implications for consumer safety.
1	1-2 marks A limited response which demonstrates: • Minimal understanding of the significance of clear food labelling concerning food allergies. • Vague or general statements about food allergies without specific discussion on labelling implications. • Lack of clarity regarding the responsibilities of food producers and the impact on consumer safety.
0	No response attempted or nothing worthy of credit.

Section C

Question	Answer	AO1	AO2	AO3	Total Mark
23.	Celtic Catering is a new food truck company run by Amy and Jake. They plan to serve both hot and cold food at outdoor events such as festivals, fairs, and sports events. Their menu will include gourmet sandwiches, salads, and hot street foods like tacos, burgers, and fries. Before starting their business, Amy and Jake must ensure their food truck complies with food hygiene regulations to maintain safety and avoid health or legal issues. They need to think about correct temperature control, food storage, personal hygiene, cleaning routines, and preventing cross-contamination. They also need to ensure all staff are trained in food safety and that the truck passes food safety inspections.				
	(a) Amy and Jake will be serving both hot and cold food however, all products are prepared from fresh vegetables and raw meat every morning. State the safe temperature ranges for storing these foods.				
	Award one mark for the correct safe temperature range. Below 8 degrees, ideally between 0 and 5 degrees Credit any other relevant response.				
	(b) Explain how they should store their raw ingredients and cooked food within a confined space to ensure safety.				
	Award one mark for each correct explanation, up to a maximum of two marks per explanation. Raw ingredients To safely store raw ingredients in a confined space, it's essential to segregate them from cooked foods by placing raw meats on the bottom shelf of the fridge to prevent cross-contamination (1). Additionally, ensure that raw ingredients are kept in airtight containers that are labelled correctly to ensure there is no cross contamination and allergens are kept separate (1). Cooked food Avoid leaving cooked foods out at room temperature for more than two hours to prevent bacterial growth and use clean utensils and surfaces to avoid cross-contamination with raw ingredients (1). You should always cover cooked foods to keep them safe from contaminants and maintain their quality until they are served (1). Credit any other relevant response.				

	(c)	Amy and Jake will be working with two additional staff members during events. Explain the personal hygiene standards that all staff must follow to ensure food safety. Award one mark for each correct explanation, up to a maximum of two marks. Given the possible limited handwashing stations at events, it's crucial that staff wash their hands thoroughly before handling food and after using the restroom, using hand sanitiser when handwashing facilities are not readily available (1). Staff must wear clean uniforms and hairnets to prevent contamination, as well as disposable gloves when handling ready-to-eat foods. (1) As festivals are often more than 1 day, it is important that fresh uniforms, hairnets daily to ensure personal hygiene throughout the event.(1) There must be an adequate supply of protective gloves changed regularly as tasks change, to stop the spread of any germs from their bodies to the food and preparation areas (1). Credit any other relevant response.		2		2
	(d)	Amy and Jake are preparing to open their new food truck, and they want to ensure their business operates efficiently while maintaining food hygiene standards during a busy festival. Evaluate the strategies they could implement to operate efficiently and ensure food safety, considering factors such as temperature control, cross-contamination, and staff management.			6	6

Indicative Content

Temperature Control

- **Thermometers:** Use of reliable thermometers to monitor food temperatures regularly.
- **Hot and cold holding:** Maintaining hot foods above 140°F (60°C) and cold foods below 40°F (4°C) to prevent foodborne illnesses.
- **Cooling techniques:** Implementing rapid cooling methods for foods that need to be chilled quickly after cooking.

Cross-contamination prevention

- **Segregation of foods:** Designating specific areas for raw and cooked foods to prevent cross-contact.
- **Colour-coded utensils:** Utilising a colour-coded system for cutting boards and utensils to easily distinguish between raw and cooked foods.
- **Separate equipment:** Providing dedicated equipment (e.g. knives, cutting boards) for raw meats versus ready-to-eat items.

Staff management

- **Comprehensive training:** Training staff on food safety practices, including hygiene, safe food handling, and allergen awareness.
- **Designated roles:** Assigning specific responsibilities to staff members during busy service to streamline operations and reduce risk.
- **Monitoring compliance:** Regularly assessing staff adherence to food safety protocols during operations.

Effective cleaning routines

- **Regular cleaning schedule:** Establishing a routine for cleaning and sanitising food preparation areas and equipment throughout the day.
- **Waste management:** Implementing proper waste disposal procedures to keep workspaces clean and free from contamination.

Communication and monitoring

- **Clear communication:** Encouraging open communication among staff to address food safety concerns immediately.
- **Monitoring systems:** Setting up systems to track food temperatures and hygiene practices, allowing for quick identification of any issues.

Conclusion

- Responses should conclude with the significance of these strategies in ensuring food safety, protecting customers' health, and maintaining the reputation of the business. Highlighting the benefits of a proactive approach to food safety can further enhance the evaluation.

Band	AO3
	5-6 marks
3	A good response which demonstrates: • A comprehensive evaluation of multiple strategies to minimise risks and ensure food safety. • Clear organisation, with well-defined sections or headings for ease of understanding. • Strong justification for strategies with relevant examples that directly address temperature control, cross-contamination, and staff management. • Critical analysis of potential challenges or benefits of implementing the strategies.
	3-4 marks
2	A basic response which demonstrates: • Some evaluation of strategies to ensure food safety, but lacking depth or thoroughness. • Limited organisation, which may affect the clarity of the response. • Inclusion of some relevant examples, though they may not be fully explained or well-connected to the topic. • Minimal critical analysis of challenges or benefits related to the strategies discussed.

1	1-2 marks A limited response which demonstrates: • Minimal evaluation of food safety strategies, with few strategies mentioned. • Lack of detail or explanation, with examples that are absent or unrelated to food safety. • Poor organisation that makes the response difficult to follow. • No critical analysis of potential challenges or benefits associated with the proposed strategies.
0	No response attempted or nothing worthy of credit.

Mapping of questions to specification content and assessment objectives: Unit 3.

Question		Mark allocation										AO1 Marks	AO2 Marks	AO3 Marks
		Topic and section												
		3.1				3.2			3.3					
		3.1.1	3.1.2	3.1.3	3.1.4	3.2.1	3.2.2	3.2.3	3.3.1	3.3.2	3.3.3			
1		X										1		
2	a	X										1		
	b	X										1		
3		X										1		
4		X										3		
5		X										2		
6			X									3		
7			X									2		
8	a			X								1		
	b			X								1		
9				X									2	
10				X									3	
11	a				X							2		
	b				X								2	

12					X							2		
13						X						1		
14						X						2		
15							X					2		
16							X						2	
17											X		2	
18			X						X	X	X		4	
19								X		X			6	
20			X						X	X	X		9	
21			X	X	X									6
22							X							6
23	a		X										1	
	b		X										4	
	c												2	
	d	X		X					X	X	X			6
Total marks												25	37	18