

LEVEL 3 AWARD IN HACCP for FOOD MANUFACTURING

Specimen Paper

Ofqual Qualification Number 500/2898/4

IMPORTANT – READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE ANSWERING THE QUESTIONS

The examination consists of 45 questions

The time allowed to complete this examination paper is **ONE AND A HALF HOURS**

The examination consists of **TWO** sections

The pass mark for this examination is 30/45

Your details and your selected answers must be marked on the separate answer sheet provided with this paper.

SECTION ONE

This section consists of 30 multiple-choice questions. You should answer every question.

Questions have **ONLY ONE** correct answer

- 1 A defence of 'Due Diligence' will be **MOST** likely to be successful if the company's HACCP system is:
- A based on product specifications
 - B verified by an enforcement officer
 - C audited by a consultant
 - D implemented, documented and up-to-date
- 2 Which **ONE** of the following will **MOST** likely ensure that HACCP systems will produce safe food?
- A hazards have been identified
 - B ingredients have been purchased from an approved supplier
 - C critical control point monitoring has been recorded
 - D all critical limits have been achieved
- 3 A HACCP system could help demonstrate that a company:
- A supplies top quality food to its customers
 - B employs qualified staff in managerial positions
 - C takes precautions to prevent contamination
 - D meets all relevant food labelling legislation
- 4 Which **ONE** of the following procedures would be carried out after all the others when applying HACCP principles?
- A identification of critical control points
 - B verification of the HACCP plan
 - C setting up the corrective action systems
 - D determination of critical limits

- 5 If a food business modifies a product, food safety regulations require the business to:
- A carry out shelf life tests
 - B review their HACCP procedures
 - C analyse their product for microbiological hazards
 - D retrain all their staff in HACCP principles
- 6 The role of local authority food safety officers is to:
- A enforce food hygiene legislation
 - B fine manufacturers for poor HACCP plans
 - C close down food businesses that do not implement HACCP
 - D be part of the HACCP team
- 7 Employees involved in developing HACCP plans **MUST** have:
- A training in microbiology
 - B knowledge of the production process
 - C project management experience
 - D staff supervisory training
- 8 What is the **MAIN** reason why a team should be used to prepare and implement HACCP plans?
- A more people can be involved
 - B a range of expertise is provided
 - C it demonstrates management commitment
 - D greater efficiency
- 9 All of the following are possible pre-requisite programmes for HACCP **EXCEPT FOR**:
- A pest control
 - B cleaning and disinfection
 - C a personal hygiene policy
 - D hazard analysis
- 10 All of the following are required for traceability of a product **EXCEPT FOR**:
- A date of manufacture
 - B product code number
 - C storage requirements
 - D use by or best before dates

- 11 In terms of HACCP, what is the reason for identifying the likely end user of your food product?
- A it enables you to target your marketing effort
 - B it affects your level of concern about potential hazards
 - C it affects your level of concern about the quality of the products
 - D it assists in the setting of a realistic price
- 12 Approved suppliers are a pre-requisite for HACCP for all of the following reasons, **EXCEPT FOR**:
- A traceability
 - B reliability
 - C confidence
 - D quality
- 13 A process flow diagram **MUST** include:
- A all checks done on the production line
 - B full details of the control procedures
 - C reference to the records which must be used
 - D all processing steps
- 14 It is important to construct a product / process flow diagram so that:
- A the business complies with the law
 - B all steps involved in production are included in the HACCP plan
 - C all staff are involved in the process
 - D the shelf-life of the product is considered
- 15 Hazard analysis includes the identification of hazards and:
- A identifying their monitoring procedures
 - B considering their significance for food safety
 - C establishing corrective actions
 - D specifying relevant critical limits
- 16 Growth of pathogenic bacteria in the manufacture of a cooked, ready to eat product may be a significant food safety hazard if it occurred:
- A during storage of the raw ingredients
 - B during handling of the raw ingredients
 - C immediately before the cooking process
 - D during storage of the finished product

- 17 Control measures at critical control points **MUST**:
- A eliminate all food safety hazards
 - B reduce the need for monitoring
 - C reduce hazards to acceptable levels
 - D reduce the risk of food spoilage
- 18 Which **ONE** of the following is true about critical limits?
- A they are set for each control point
 - B they separate good quality food from poor quality food
 - C they separate the acceptable from the unacceptable
 - D they are established by using the decision tree
- 19 Critical limits can be validated by:
- A reference to scientific data
 - B tasting panels
 - C assessing the quality of the product
 - D production times
- 20 Monitoring systems should specify all of the following **EXCEPT FOR**:
- A who is responsible
 - B how it should be carried out
 - C how often it should be done
 - D who can authorise the restart of production
- 21 In a HACCP system, corrective action must always be taken:
- A if the quality of the final product is affected
 - B after an audit by enforcement officers
 - C after monitoring by management
 - D when critical limits have not been achieved
- 22 A manager has noticed that deliveries from a supplier show an increased level of contamination with physical hazards. What would be the **MOST** effective action to take?
- A increase monitoring of deliveries
 - B re-audit the supplier
 - C introduce a cleaning step into the production process
 - D increase process temperatures

- 23 All the following are HACCP documents **EXCEPT FOR:**
- A temperature control records
 - B work instructions
 - C raw materials specifications
 - D stock invoices
- 24 Changes to processes may be identified during:
- A an audit of the process flow
 - B a review of corrective actions
 - C an audit of training records
 - D a review of waste levels
- 25 The accuracy of a HACCP flow diagram should be confirmed by:
- A training employees in the use of the flow diagram
 - B asking supervisors if the diagram is correct
 - C observing the process during production periods
 - D having the flow diagram checked by enforcement officers
- 26 Which of the following could result in microbiological hazards occurring in a processed food product?
- A use of cleaning chemicals and disinfectants on plant and equipment
 - B cross-contamination of raw food from cooked foods
 - C critical limits for cooking time being achieved
 - D storage of the product at greater than 5°C
- 27 Before developing a HACCP plan, knowledge of which of the following is needed?
- A required shelf life
 - B control measures
 - C critical limits
 - D nutritional content
- 28 By setting critical limits for critical control points you are able to:
- A keep the number of critical control points to a minimum
 - B distinguish between poor and good quality product
 - C separate the acceptable from the unacceptable
 - D determine the level of risk from a hazard

- 29 Which of the following should be included on a critical control point monitoring procedure?
- A who is to verify the critical limit
 - B who is to check that the critical limit is not exceeded
 - C who set the critical limit
 - D what action to take if the step is within tolerance
- 30 HACCP systems should be reviewed if there is a change in:
- A factory layout
 - B quality requirements
 - C the pest control contractor
 - D management

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SECTION TWO

**This section (questions 31- 45) consists of three scenarios.
Each scenario has five questions**

Each question has ONLY ONE correct answer

A codex decision tree and outline information on the growth requirements of bacteria can be found at the end of this paper and may be used to help you answer some of the questions in this section.

Scenario One: Production of ham and cheese pizza

The scope of the HACCP study is physical and biological hazards in the production of ham and cheese pizza.

The production premises is a medium scale food manufacturing plant that operates comprehensive prerequisite programmes.

Ingredients:

Pizza base mix: Pizza flour, water, yeast, sugar, vegetable oil, salt, skim milk powder, lecithin, cornstarch, shortening, sodium aluminium phosphate

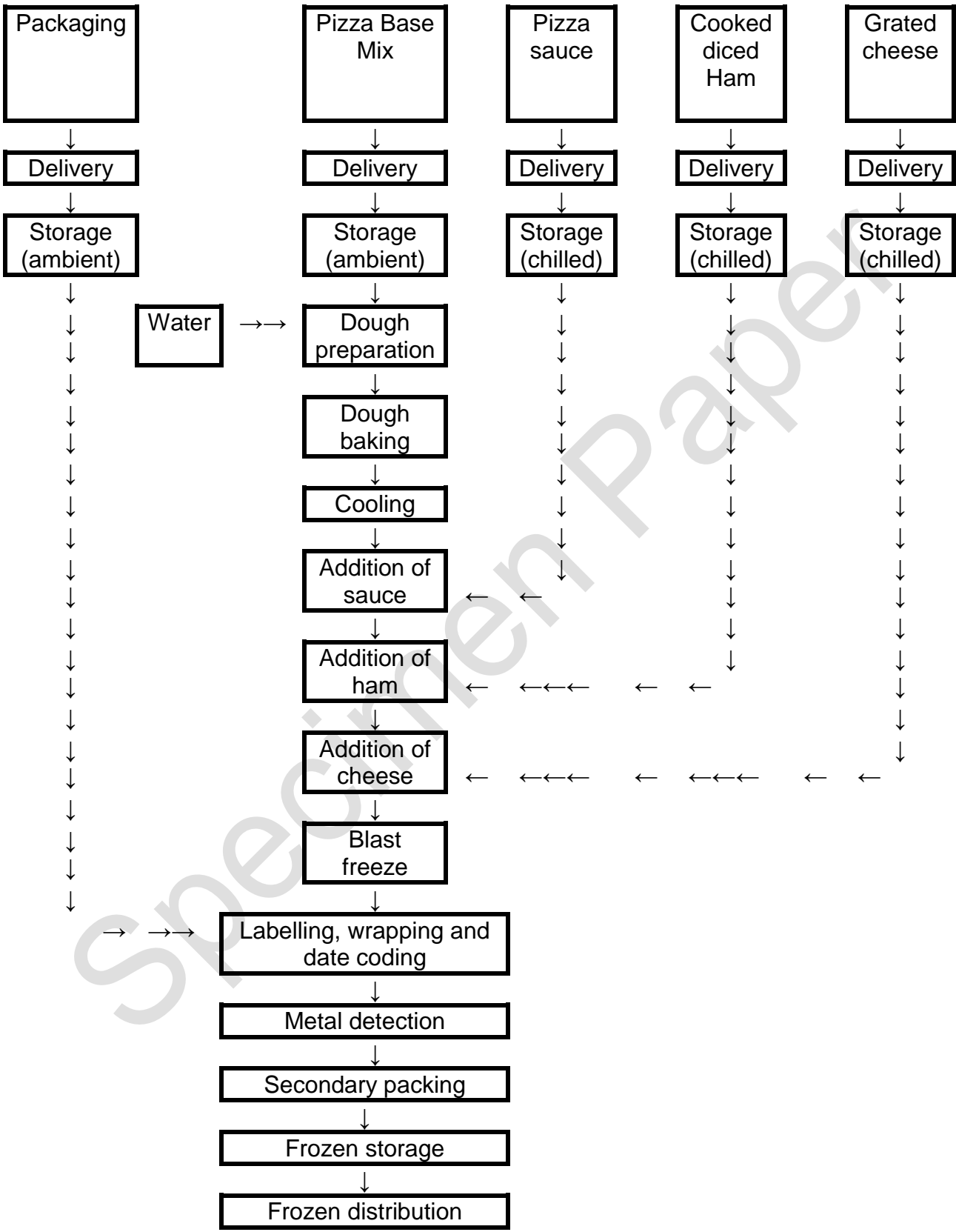
Pizza sauce: Water, tomato paste, pizza seasoning, vegetable oil

Ham: Cooked and diced

Cheese products: Grated cheese

Packaging: Polypropylene tray base, flo-wrap and labels

The diagram below shows a process flow chart for the production of a frozen pizza for retail sale. It is intended to be heated and served by the consumer.



- 31 Which of the following lists are food safety hazards that could all be associated with the pizza dough mix?
- A pesticides, microbial pathogens, metal fragments
 - B insect debris, pesticides, discolouration
 - C metal fragments, herbicides, unusual odour
 - D fungicides, microbial pathogens, lumpiness
- 32 The pizza sauce is obtained from approved suppliers that produce the sauce to high hygiene standards and have a fully documented and validated HACCP system. The sauce is delivered in sealed containers and is poured into hoppers when required for addition to the pizza base. The HACCP team do not think that the sauce application step is a critical control point for microbiological hazards because:
- A only a small quantity of sauce is applied
 - B the pizza will be frozen before packing
 - C the pH of the sauce is below 4.5
 - D the pizza will be heated before being eaten
- 33 Which of the following records would be the **MOST** useful to include as evidence that the pizza had been produced safely?
- A absenteeism log and chilled store log
 - B staff rota and pest control records
 - C customer complaint records and chilled store log
 - D blast freezer and dough baking temperature logs
- 34 The metal detection stage has been identified as a critical control point because:
- A it is a legal requirement
 - B it is a customer requirement
 - C it enables identification of metal fragments
 - D there is no further step which will control metal
- 35 Microbial growth on the ham is a hazard if the temperature of the ham is within the temperature danger zone. Receipt of the ham has therefore been identified as a critical control point. What would be an appropriate corrective action to take if the delivery temperature of the ham was 10°C?
- A accept delivery of the ham and inform the supplier of the problem
 - B use the ham immediately
 - C place the ham in a freezer until needed
 - D reject the ham and contact the supplier

Scenario Two: Production of roast loin of pork for retail sale

The scope of the HACCP study is physical and biological hazards in the production of roast loin of pork

The production premises is a medium scale food manufacturing plant that operates comprehensive prerequisite programmes.

Ingredients:

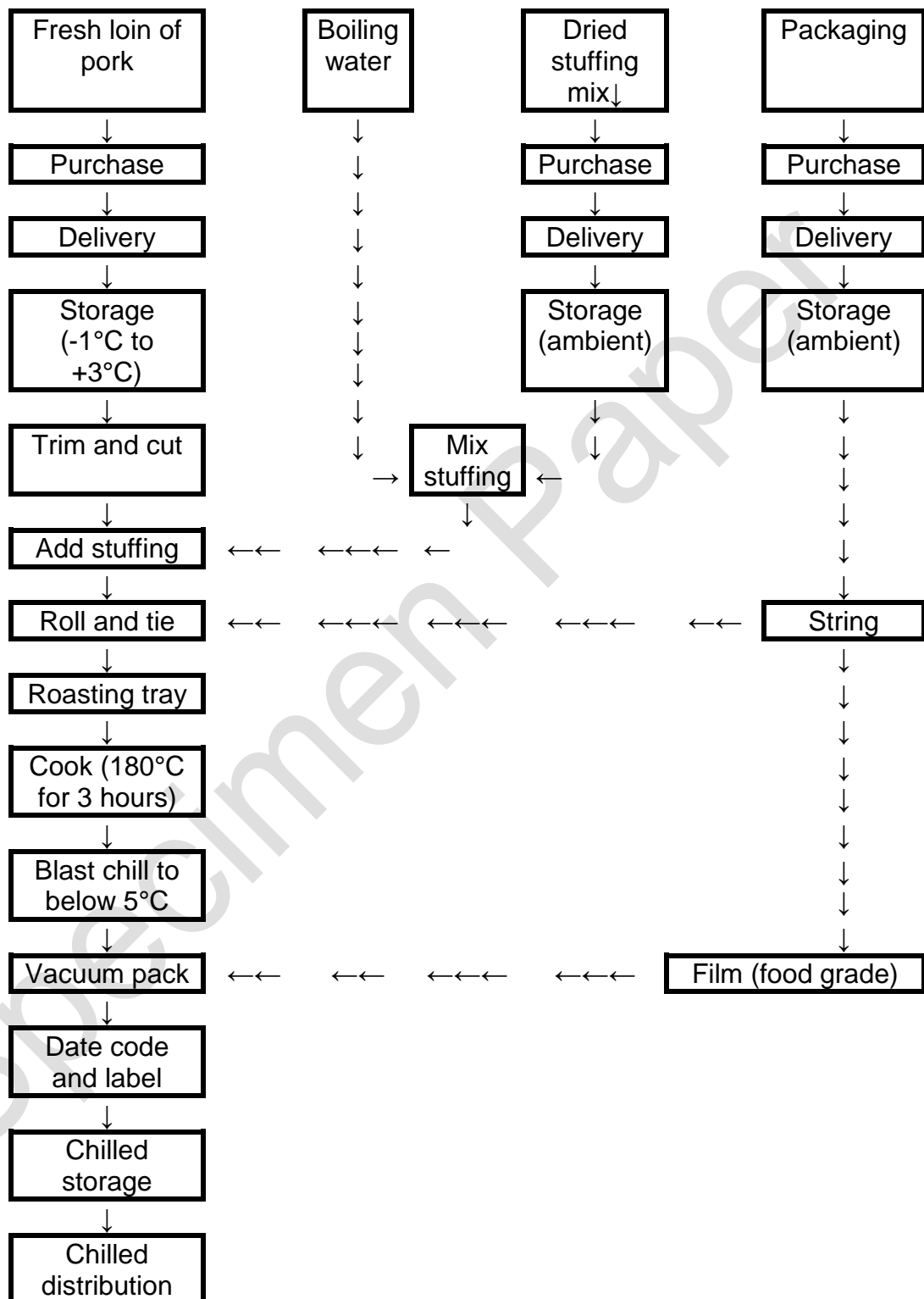
Pork, stuffing mix

Dried stuffing mix contains breadcrumbs, dehydrated onion, dried herbs and seasoning.

Packaging: string, film wrap

All ingredients and packaging are obtained from approved suppliers.

The diagram below shows a section of a process flow diagram for the production of roast loin of pork which is cooked and vacuum packed for distribution to retail outlets for sale as a sliced ready to eat product on delicatessen counters.



- 36** A batch of pork is removed from the oven after cooking and temperature probed. This shows a core temperature of 65°C. The core temperature critical limit in the HACCP plan is 80°C. What action should be taken?
- A** cook the next batch of pork at a higher temperature to make sure the core temperature critical limit is achieved
 - B** return the pork to the oven for another 30 minutes
 - C** continue cooking until the core temperature critical limit is achieved
 - D** blast chill, wrap and label and place in chilled storage
- 37** An identified hazard with the dried herbs in the stuffing mix is the presence of pathogenic vegetative bacteria such as salmonella. The critical control point with regard to this is:
- A** receipt from an approved supplier
 - B** microbiologically testing each batch on receipt
 - C** cooking to the required temperature
 - D** make sure staff use hygienic food handling procedures
- 38** How would the critical limit for the cooking process be validated?
- A** make sure the temperature probes are calibrated regularly against standards
 - B** obtain advice on cooking temperatures from an external auditor
 - C** carry out a series of measurements using calibrated probe thermometers
 - D** carry out an internal audit of the cooking process
- 39** When the premises is opened in the morning, it is found that the last batch of the previous day's production of cooked meat was not placed in the chiller after wrapping and labelling. What immediate corrective action should be taken?
- A** dispose of the meat
 - B** retrain the staff
 - C** review the HACCP procedures
 - D** place the meat in cold storage
- 40** During a routine check of the packing line it was noticed that the meat had been incorrectly date coded. What corrective actions should be taken by the food operatives?
- A** stop production, inform supervisor, change date code, re-pack incorrectly coded product
 - B** stop production, inform enforcement officer, change date code, re-pack incorrectly coded product
 - C** inform supervisor, recall product, change date code, re-pack incorrectly coded product
 - D** inform supervisor, inform customers, recall product, change date code

Scenario Three: Production of sandwiches with a prawn and mayonnaise filling

The scope of the HACCP study is physical and biological hazards in the production of prawn mayonnaise sandwiches

The production premises is a large scale operation supplying major retail outlets and operates comprehensive prerequisite programmes.

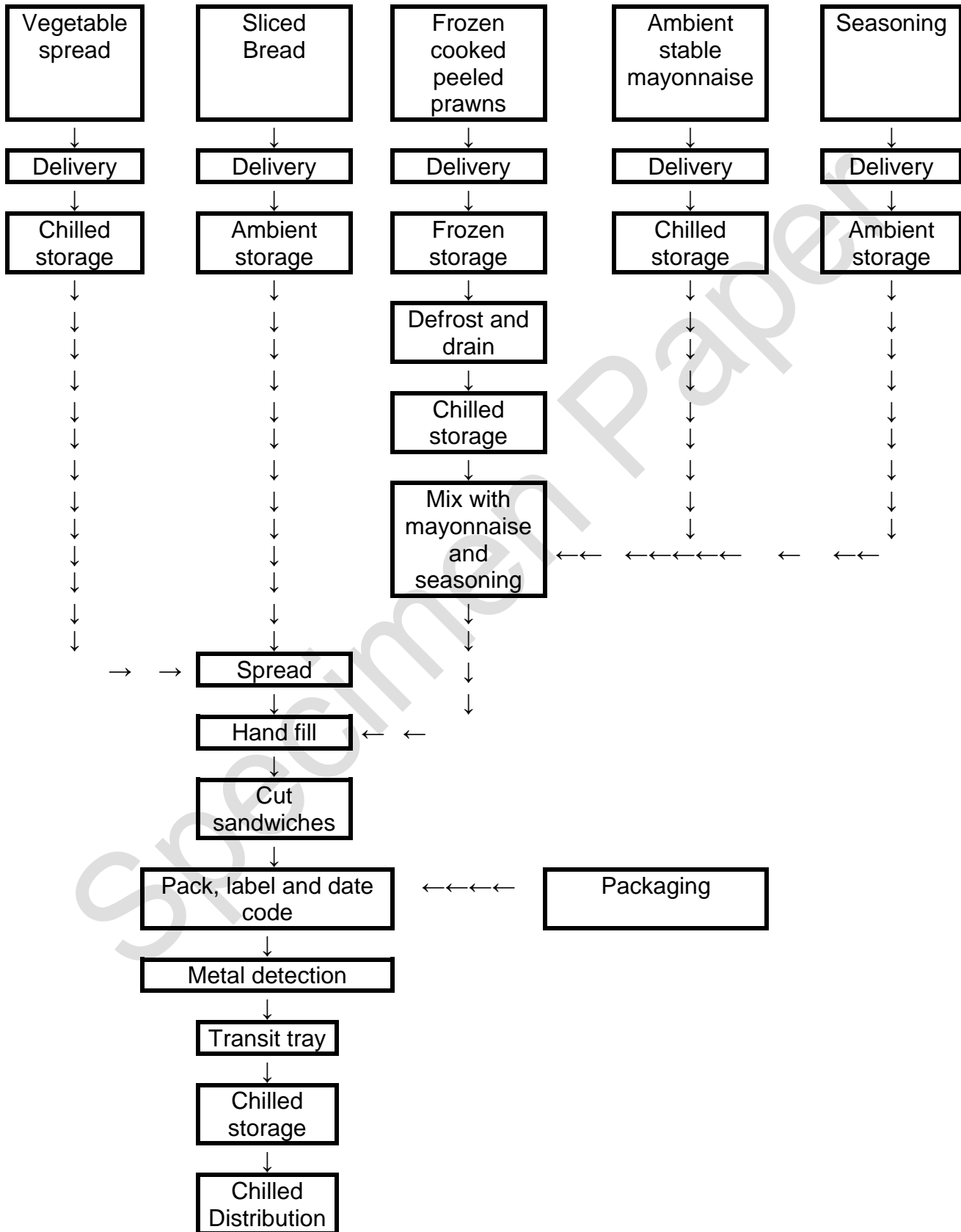
Ingredients:

Sliced bread, vegetable spread, frozen cooked peeled prawns, ambient stable mayonnaise, seasoning

Sandwiches are packaged in pre-printed triangular cardboard sandwich wedges. Sandwiches need to be stored under chilled conditions and have a shelf-life of two days from date of production.

All ingredients plus packaging are obtained from approved suppliers

The outline flow diagram below shows the manufacture of prawn mayonnaise sandwiches from pre-prepared ingredients. The sandwiches are assembled, wrapped, packed and stored prior to distribution.



- 41 Metal contamination has been identified as a possible hazard when cutting the sandwiches. Using the Codex decision tree supplied, determine which is the correct sequence of answers in deciding whether or not the process step is a critical control point

Process step	Hazard	Control measure
Cut sandwich	Metal contamination from broken blade	Metal detection

	Q1	Q1a	Q2	Q3	Q4	CCP?
A	YES	-	YES	-	-	YES
B	YES	-	NO	YES	YES	NO
C	YES	-	NO	YES	NO	YES
D	YES	-	NO	NO	-	NO

- 42 The manager decides that the most effective control measure he can introduce to prevent microbiological contamination by food handlers is for his staff to wash their hands effectively. How can this be achieved?

- A** carry out food hygiene training
- B** monitor hand washing of staff
- C** ensure adequate hand washing facilities
- D** all the above

- 43 Which **ONE** of the following lists contains an item which is **NOT** a pre-requisite for the process of manufacturing the sandwiches?

- A** approved suppliers, pest control, cleaning and disinfection, personal hygiene
- B** waste management, cleaning and disinfection, metal detection, stock rotation
- C** training, good design of premises, traceability, waste management
- D** preventative maintenance, equipment calibration, training, pest control

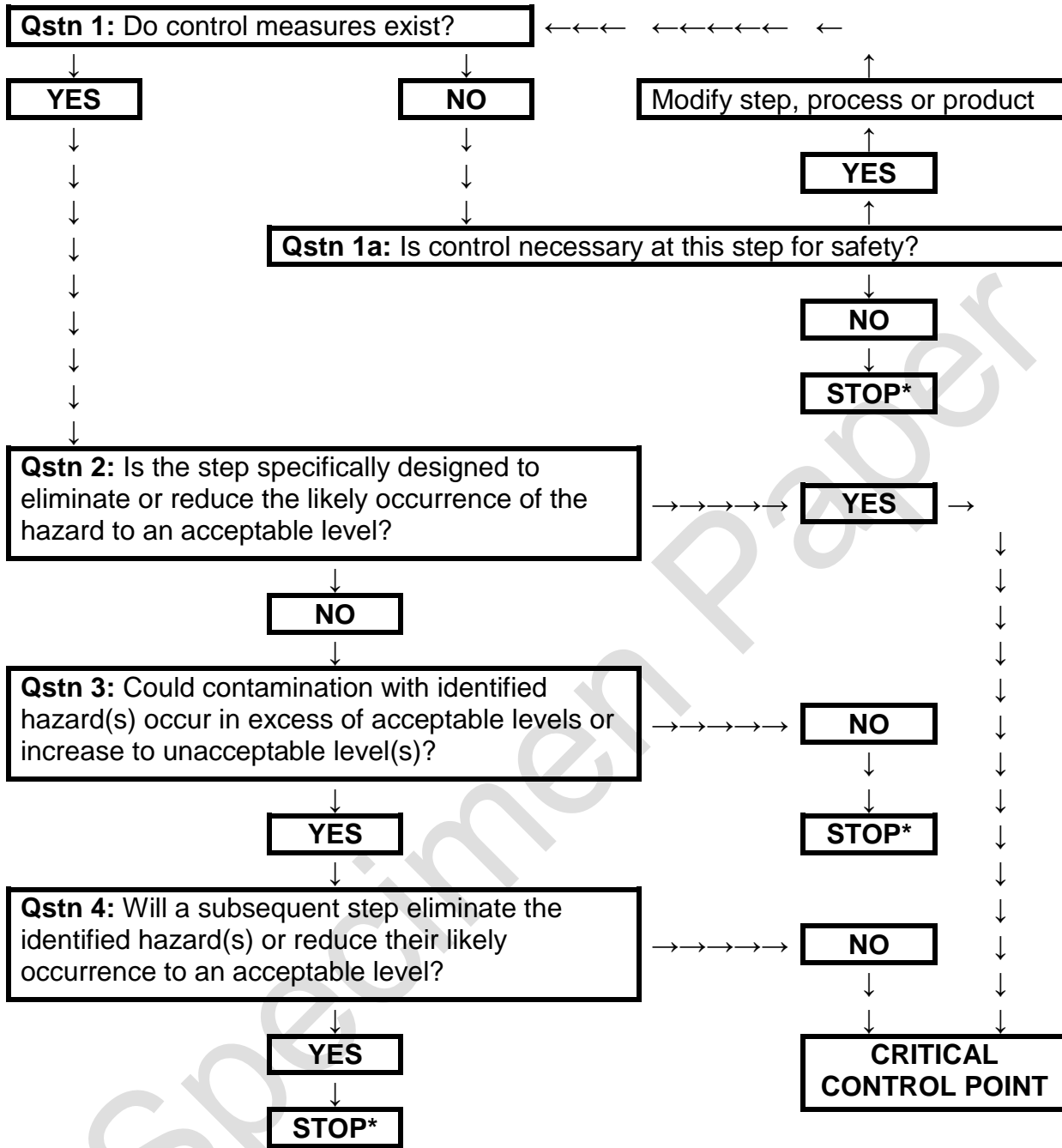
- 44 Which of the following is the safest control measure to reduce the risk of microbial growth during the defrosting of prawns?

- A** place in a chilled cabinet overnight
- B** leave overnight at room temperature
- C** defrost in warm water
- D** spread out on a tray at room temperature

- 45 The presence of fragments of prawn shell in the sandwiches has been identified as a physical hazard. Which **ONE** of the following would be a control measure to reduce this risk to an acceptable level?
- A use of an approved supplier
 - B sieving when draining
 - C observation by staff
 - D sampling on delivery

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CODEX CRITICAL CONTROL POINT DECISION TREE



- Stop and proceed with the next identified hazard(s).

Growth Requirements of Bacteria

In order to grow bacteria require a source of nutrients, an appropriate atmosphere, neutral or alkaline conditions, available moisture and an appropriate temperature.

A large number of bacteria are able to grow with or without oxygen. Some bacteria (known as obligate aerobes) will only grow if oxygen is present. Other bacteria (obligate anaerobes) will only grow in the absence of oxygen.

Most bacteria grow best in a neutral or alkaline environment. Bacteria do not grow well in foods which are acidic (with a pH of less than 7.00), the more acidic the food, the less likely they are to support the growth of bacteria.

Foods that are dried or high in salt or sugar have a reduced available moisture content. Bacteria will grow poorly on these foods.

Most bacteria will not grow in cold conditions, or will only grow and divide slowly. High temperatures will also inhibit the growth of bacteria, most food poisoning bacteria are killed if exposed to a temperature of 70°C for two minutes or more. The optimum temperature range for the growth of most bacteria is 5°C to 63°C. This is known as the 'temperature danger zone'.