



BOARD OF STUDIES
NEW SOUTH WALES

2005

**HIGHER SCHOOL CERTIFICATE
EXAMINATION**

Food Technology

General Instructions

- Reading time – 5 minutes
- Working time – 3 hours
- Write using black or blue pen
- Write your Centre Number and Student Number at the top of pages 5, 7, 9 and 11 or 13

Total marks – 100

Section I Pages 2–4

10 marks

- Attempt Questions 1–10
- Allow about 15 minutes for this section

Section II Pages 5–14

55 marks

This section has two parts, Part A and Part B

- Allow about 1 hour and 35 minutes for this section

Part A – 45 marks

- Attempt Questions 11–13

Part B – 10 marks

- Attempt either Question 14 or Question 15

Section III Page 15

20 marks

- Attempt either Question 16 or Question 17
- Allow about 40 minutes for this section

Section IV Page 16

15 marks

- Attempt ONE question from Questions 18–21
- Allow about 30 minutes for this section

Section I

10 marks

Attempt Questions 1–10

Allow about 15 minutes for this section

Use the multiple-choice answer sheet.

Select the alternative A, B, C or D that best answers the question. Fill in the response oval completely.

Sample: $2 + 4 =$ (A) 2 (B) 6 (C) 8 (D) 9
A B C D

If you think you have made a mistake, put a cross through the incorrect answer and fill in the new answer.

A B C D

If you change your mind and have crossed out what you consider to be the correct answer, then indicate the correct answer by writing the word *correct* and drawing an arrow as follows.

A B C D
correct
↙

- 1** Why is milk pasteurised?

 - (A) To improve safety
 - (B) To improve its flavour
 - (C) To facilitate packaging
 - (D) To increase nutritive value

- 2** Which sector of the Australian food industry is most likely to provide career opportunities for food technologists?

 - (A) Agriculture and fisheries
 - (B) Food manufacture
 - (C) Food retail
 - (D) Food service and catering

- 3** What are raw material specifications used for?

 - (A) To reduce price
 - (B) To ensure product supply
 - (C) To increase company profits
 - (D) To maintain product consistency

- 4** Which of the following consumer demands led to the development of generic brands?

 - (A) Lower prices
 - (B) Convenience
 - (C) Nutritional benefits
 - (D) Environmental sustainability

- 5** Which of the following is the most recent development in mechanisation within the Australian food industry?

 - (A) Electric mixers
 - (B) Genetic engineering
 - (C) Stainless steel equipment
 - (D) Automated processing lines

- 6 Which of the following is an internal factor that impacts on the development of new food products?
- (A) Economic environment
 - (B) Packaging materials
 - (C) Production facilities
 - (D) Technological environment
- 7 Which of the following is the main role of the Australian Quarantine Inspection Service?
- (A) To impose tariffs on imported foods
 - (B) To check for accurate food labelling
 - (C) To X-ray all plant foods to be exported
 - (D) To protect Australian agriculture from contamination
- 8 Which of the following is an example of a 'me too' product?
- (A) Bread with added calcium
 - (B) Generic brand of canned lemonade
 - (C) Addition of vanilla flavour to Coca Cola
 - (D) Rations designed for consumption during space flight
- 9 Which of the following is a feature of the marketing plan for a new food product?
- (A) Feasibility studies
 - (B) Distribution systems
 - (C) Technological developments
 - (D) Company production facilities
- 10 What is the purpose of quality management in food manufacture?
- (A) To support raw material selection
 - (B) To ensure consistent safe products
 - (C) To minimise the need for food additives
 - (D) To aid the introduction of computerised production systems

Food Technology

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Centre Number

Section II

55 marks

Allow about 1 hour and 35 minutes for this section

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Student Number

Part A – 45 marks

Attempt Questions 11–13

Answer the questions in the spaces provided.

Marks

Question 11 — The Australian Food Industry (15 marks)

- (a) Identify TWO advisory groups that are involved in formulating policy and legislation in the Australian food industry. **2**

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- (b) Identify ONE piece of legislation that applies to each of the following government levels.

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|-------|---------------|----------|
| (i) | Local | 1 |
| (ii) | State | 1 |
| (iii) | Federal | 1 |

Question 11 continues on page 6

Question 11 (continued)

- (c) Select TWO pieces of legislation identified in part (b) and explain the impact of the legislation on the Australian food industry.

Name of legislation

- (i) 2
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Name of legislation

- (ii) 2
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- (d) Predict and explain a range of impacts on society if food policy and legislation were not enforced. 6

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End of Question 11

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Centre Number

Section II – Part A (continued)

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Student Number

Marks

Question 12 — Food Manufacture (15 marks)

- (a) Outline TWO features of HACCP. **2**

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- (b) Describe the advantages of using HACCP. **3**

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Question 12 continues on page 8

Question 12 (continued)

- (c) Identify a manufactured food product. Answer parts (i) and (ii) in relation to this product.

Manufactured food product

- (i) Describe the process that transforms the raw materials into the manufactured food product. 5

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- (ii) Identify and explain each of the critical control points in the manufacture of this food. 5

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End of Question 12

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Centre Number

Section II – Part A (continued)

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Student Number

Marks

Question 13 — Food Product Development (15 marks)

A food manufacturer has developed a high fibre, calcium enriched, instant noodle product with several different flavours.

- (a) Identify and explain the type of food product development that relates to this new instant noodle. **3**

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- (b) Describe a target market for this product, and justify your answer. **4**

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Question 13 continues on page 10

Question 13 (continued)

- (c) Design a marketing plan for this product. Explain how components of this plan relate to both the product and the target market. **8**

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End of Question 13

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Centre Number

Section II (continued)

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Student Number

Part B – 10 marks

Attempt either Question 14 or Question 15

Answer the question in the spaces provided.

Marks

Question 14 — Contemporary Food Issues – Nutrition (10 marks)

Identify a specific group with special nutritional requirements. Answer parts (a)–(c) in relation to this group.

Specific group

(a) Outline ONE diet-related disorder for the specific group identified above. **2**

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(b) Describe factors that have contributed to this diet-related disorder. **3**

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Question 14 continues on page 12

Question 14 (continued)

- (c) Propose a nutrition-based strategy that could be used to assist in the prevention and treatment of this diet-related disorder. **5**

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End of Question 14

Food Technology

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Centre Number

Section II – Part B (continued)

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Student Number

Marks

Do NOT attempt Question 15 if you have already attempted Question 14.

Question 15 — Contemporary Food Issues – Marketplace (10 marks)

- (a) Define the term *cradle-to-grave analysis*. **1**

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- (b) Explain why a cradle-to-grave analysis is essential for a product to be successful in the marketplace. **3**

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Question 15 continues on page 14

Question 15 (continued)

Select a food product you have studied. Answer part (c) in relation to this product.

Food product

- (c) Discuss the environmental impact of your selected product, and propose strategies to minimise this impact.

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End of Question 15

Food Technology

Section III

20 marks

Attempt either Question 16 or Question 17

Allow about 40 minutes for this section

Answer the question in a writing booklet. Extra writing booklets are available.

	Marks
Question 16 — Food Manufacture (20 marks)	
(a) Explain the reasons for preserving foods, using examples to support your answer.	8
(b) Select THREE preservation processes. Discuss the principles of food preservation used in each, using examples to support your answer.	12

OR

Question 17 — Food Product Development (20 marks)	
(a) Explain the impact of internal and external factors on food product development.	8
(b) Discuss how a food company could respond to internal and external factors in its product development activities. Support your answer with relevant examples.	12

Please turn over

Section IV

15 marks

Attempt ONE question from Questions 18–21

Allow about 30 minutes for this section

Answer the question in a SEPARATE writing booklet. Extra writing booklets are available.

In your answer you will be assessed on how well you:

- present ideas clearly in a well-structured text
 - use appropriate terminology
 - support the argument with relevant examples
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Contemporary Food Issues – Nutrition

Question 18 (15 marks)

Analyse the physical effects and economic costs of malnutrition and diet-related disorders within the Australian community.

OR

Question 19 (15 marks)

Evaluate the benefits of consuming nutritionally modified foods for the nutritional status of the Australian community.

Contemporary Food Issues – Marketplace

Question 20 (15 marks)

Analyse the trend towards value-added foods and their impact on society and food manufacturers.

OR

Question 21 (15 marks)

Evaluate environmental and economic implications of a marketplace trend you have investigated.

End of paper