



BOARD OF STUDIES
NEW SOUTH WALES

2003

**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 are foods preserved?
- (A) To maintain the original pH
 - (B) To produce convenience foods
 - (C) To provide safe and nutritious foods
 - (D) To ensure the absence of pesticide residues
- 2** Which sector of the Australian food industry would be most directly affected by a drought?
- (A) Agriculture and fisheries
 - (B) Food processing and manufacture
 - (C) Food retail
 - (D) Food service and catering
- 3** Which factor would have the greatest impact on food product development?
- (A) Access to rail transport
 - (B) Factory location
 - (C) Production facilities
 - (D) Prototype testing
- 4** How does modified atmosphere packaging preserve food?
- (A) It prevents enzyme activity.
 - (B) It alters the gases that surround the food.
 - (C) It prevents the entry of oxygen to the product.
 - (D) It limits the water available for micro-organisms to grow.
- 5** Which is the major reason why the Australian food industry responds to consumer influences?
- (A) To expand export sales
 - (B) To minimise industrial action
 - (C) To maintain market share and profitability
 - (D) To address issues relating to community nutrition

- 6** Which of the following food types was developed in response to nutritional considerations?
- (A) Low alcohol beer and wines
 - (B) Low fat, low sugar yoghurt
 - (C) Pre-cut packaged salads
 - (D) Pre-packaged frozen meals
- 7** What is the purpose of setting specifications for new food products?
- (A) To assist in the feasibility study
 - (B) To enhance product convenience
 - (C) To conform with company image
 - (D) To ensure consistent, high quality foods
- 8** What is the major way in which the Australian food industry contributes to the national economy?
- (A) It employs many people.
 - (B) It uses imported materials.
 - (C) It addresses HACCP principles.
 - (D) It funds research and development.
- 9** Which of the following would best demonstrate an appropriate use of technology in a small bakery?
- (A) Bread-slicing machine
 - (B) Computerised labelling machine
 - (C) Fully automated production line
 - (D) Automatic bread-buttering machine
- 10** Which of the following is the most important driver of food product development?
- (A) Company image
 - (B) Consumer demands
 - (C) Political development
 - (D) Promotional programs

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 career opportunities that exist in the Australian food industry. **1**

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- (b) Explain how technology has impacted on employment opportunities and careers in the Australian food industry. Use TWO appropriate examples to support your answer. **4**

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Question 11 continues on page 6

Question 11 (continued)

- (c) Discuss how gender issues may impact on career opportunities and working conditions within the Australian food industry. Refer to TWO gender issues to support your answer. 4

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- (d) Explain how government policies and legislation have affected working conditions within the Australian food industry. Use THREE examples of government policies and/or legislation to support your answer. 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)

Choose a perishable food product. Answer parts (a) and (b) in relation to this product.

Chosen perishable food product:

(a) Outline conditions that would delay spoilage of the chosen perishable food product at each of the following stages:

(i) Processing plant **2**

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(ii) Distribution **2**

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(iii) Storage at retail outlet **2**

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Question 12 continues on page 8

Question 12 (continued)

- (b) For the perishable food product you have chosen, predict the impact of the packaging, storage conditions, and distribution systems on the environment. 6

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- (c) 'Friesian' has been contracted to supply primary schools throughout NSW with 250 mL glass bottles of milk for children to have at recess. 3

Propose a packaging material as an alternative to glass. Justify your choice.

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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)

Development of a new food product has reached the stage where a prototype has been produced and is ready to be tested. Choose a new food product, and answer the following parts (a), (b) and (c) in relation to this product.

Chosen new food product:

- (a) Define what is meant by *prototype testing*. 1

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- (b) List FOUR tests that should be conducted at the prototype stage for the chosen new food product. 4

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Question 13 continues on page 10

Question 13 (continued)

(c) Select TWO of the tests listed in part (b) for your new food product. Discuss the method and purpose of each test.

(i) Test 1: **5**
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(ii) Test 2: **5**
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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)

Choose a food product that has been promoted in the media on the basis of nutrition. Answer parts (a) and (b) in relation to this product.

Chosen food product:

(a) (i) Describe the chosen food product. **1**

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(ii) Identify the characteristics of the target market for the chosen food product. **1**

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Question 14 continues on page 12

Question 14 (continued)

- (b) Discuss how the consumption of the product you have chosen is likely to affect the nutritional status of the target market. **4**

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- (c) Explain how advertising of food may influence attitudes towards body image. Use examples to support your answer. **4**

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End of Question 14

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Centre Number

Section II – Part B (continued)

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Student Number

Marks

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

(a) (i) Define the term *multinational food company*. **1**

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(ii) Name ONE multinational food company. **1**

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(b) Explain how globalisation has impacted on world food supply. **3**

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Question 15 continues on page 14

Question 15 (continued)

- (c) Discuss the impact of globalisation of the food industry on social justice in developed and developing countries. **5**

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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)	
Choose a food product you have studied. Identify the product and answer parts (a), (b) and (c) in relation to this product.	
(a) List the major raw materials used in the production of the chosen food product.	2
(b) Discuss FOUR factors that influence a manufacturer's decisions in selecting raw materials for the chosen food product.	8
(c) For the product chosen, describe the processes and critical control points involved in the conversion of the raw materials into the final food product.	10

OR

Question 17 — Food Product Development (20 marks)	
(a) Identify THREE types of food product development.	2
(b) Compare, using examples, the THREE types of food product development that you identified in part (a).	8
(c) Discuss how a company could increase profits by using the types of food product development identified in part (a). Use examples to support your answer.	10

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)

Discuss how lifestyle and cultural practices influence the planning and preparation of foods and meals.

OR

Question 19 (15 marks)

Discuss the use of dietary supplements in Australia.

Contemporary Food Issues – Marketplace

Question 20 (15 marks)

Discuss ethical issues that arise in the marketing of food products.

OR

Question 21 (15 marks)

Discuss the trends in the marketplace that have contributed to changes in traditional diets and consumer health.

End of paper