

BOARD OF STUDIES  
NEW SOUTH WALES

**2007**

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, 9, 13 and 17 or 19

**Total marks – 100**

**Section I** Pages 2–4

**10 marks**

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

**Section II** Pages 5–20

**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** Pages 21–22

**20 marks**

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

**Section IV** Page 23

**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 for Questions 1–10.

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- 1 What is the most commonly used construction material in food processing equipment?
  - (A) Copper
  - (B) Glass
  - (C) Stainless steel
  - (D) Timber
  
- 2 Which new food products are most likely to be successful in the marketplace?
  - (A) Me-too products
  - (B) Manufactured products
  - (C) New-to-world products
  - (D) Line extension products
  
- 3 Which factor affects the macro environment in which a food producer operates?
  - (A) Economic conditions
  - (B) Financial position
  - (C) Personnel expertise
  - (D) Production facilities
  
- 4 Microwaveable meals best satisfy needs arising from which social change?
  - (A) Decreasing family size
  - (B) Decreasing time and skills in food preparation
  - (C) Increasing acceptance of multicultural foods
  - (D) Increasing consumer demand for health and well-being

- 5** What is the main reason for the development of a low-fat, fast food menu in a large multinational company?
- (A) To reduce packaging waste
  - (B) To increase company profit
  - (C) To use new processing equipment
  - (D) To address consumer demand for low-cost products
- 6** Which of the following is responsible for issuing a food-product recall?
- (A) Local council food inspectors
  - (B) Australian Food and Grocery Council
  - (C) Food Standards Australia New Zealand (FSANZ)
  - (D) Australian Quarantine Inspection Service (AQIS)
- 7** What would a company use to ensure that it provides food of a consistently high quality to consumers?
- (A) Quality testing
  - (B) Quality assurance
  - (C) Sensory assessment
  - (D) Hazard Analysis and Critical Control Point (HACCP)
- 8** What is the role of an oxygen scavenger sachet in active packaging?
- (A) To absorb moisture, thus preventing mould growth
  - (B) To replace nitrogen content, thus preventing flavour changes
  - (C) To add carbon dioxide that extends product shelf-life
  - (D) To absorb undesirable gases that reduce product shelf-life

- 9** What is a negative impact of multinational companies on the Australian food industry?
- (A) Company profits going overseas
  - (B) Lower skilled workforce in Australia
  - (C) Less competition for local companies
  - (D) Fewer jobs available in transport and distribution
- 10** Which of the following food products is most likely to be associated with food poisoning caused by *Clostridium botulinum*?
- (A) Boiled rice
  - (B) Roast chicken
  - (C) Canned tomatoes
  - (D) Canned sweet corn

# 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 sectors of the Australian food industry.

**2**

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(b) Describe the relationship between gender issues and career opportunities in the Australian food industry.

**3**

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**Question 11 continues on page 6**



Question 11 (continued)

- (d) Discuss, with relevant examples, the impact of EITHER a policy OR a piece of legislation on an organisation in the Australian food industry. **4**

Organisation: .....

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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) Identify THREE reasons for preserving foods. **3**

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- (b) Identify TWO preservation processes that can be applied to a particular food. **2**

Food:.....
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**Question 12 continues on page 10**

Question 12 (continued)

- (c) Outline the STEPS involved in ONE of the preservation processes identified in part (b). 3

Preservation process: .....
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- (d) Explain the PRINCIPLES of ONE of the preservation processes identified in part (b). 3

Preservation process: .....
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Question 12 continues on page 11

Question 12 (continued)

- (e) Compare the advantages and disadvantages of TWO preservation processes, using relevant examples. **4**

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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) Complete the steps of food product development by writing the missing steps in the spaces provided. **2**

- .....
- Market research
- Product specification
- Feasibility study
- .....
- Development of a prototype
- Testing product prototype

**Question 13 continues on page 14**

Question 13 (continued)

Use the design brief below to answer parts (b) to (f).

**DESIGN BRIEF**

Pizza Palace is a multinational fast food pizza chain selling pizza, garlic bread, soft drinks and ice-cream. Food is take away or home delivered. Pizza Palace has lost customers to fast food competitors who have introduced healthy choices into their menu. Pizza Palace has decided to introduce low-fat pizza options.

(b) Suggest ONE pizza prototype that suits this design brief. **1**

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(c) Outline TWO types of market research that could be conducted for this design brief. **2**

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(d) Describe product specifications for the pizza prototype identified in part (b). **3**

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**Question 13 continues on page 15**

Question 13 (continued)

- (e) Define a feasibility study and explain the importance of this in relation to Pizza Palace. **3**

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- (f) Describe TWO types of testing that could be conducted on the pizza prototype and predict how the results of these tests may influence the success of the final product. **4**

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**End of Question 13**

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# 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) Describe TWO trends in the marketplace, using relevant examples. **4**

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**Question 15 continues on page 20**



# 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)

Use the illustration below to answer parts (b) and (c).

**No Name Brand**

*Pasta Sauce*



*cheese, mushroom  
and garlic*

INGREDIENTS: TOMATOES (87%) (PUREE, DICED), MUSHROOMS (5%), CHEESE (3.5%), SUGAR, HERBS, ONIONS, SALT, OLIVE OIL, GARLIC, SPICES  
MANUFACTURED ON EQUIPMENT THAT ALSO PROCESSES PRODUCTS CONTAINING PEANUT, CRUSTACEA, AND EGG

NUTRITION INFORMATION		
SERVINGS PER PACKAGE: 4 SERVING SIZE: 125g		
	QTY PER 125 g	QTY PER 100 g
ENERGY	308 kJ	246 kJ
PROTEIN	3.0 g	2.4 g
FAT TOTAL	1.9 g	1.5 g
– SATURATED	0.6 g	0.5 g
CARBOHYDRATE	10.5 g	8.4 g
– SUGARS	8.0 g	6.4 g
SODIUM	445 mg	355 mg
POTASSIUM	540 mg	430 mg

Packed for a large national retail chain

Any problems? Call 1 800 999 999

**MADE IN AUSTRALIA FROM  
LOCAL AND IMPORTED INGREDIENTS**

BEST BEFORE 17:13  
17/11/2009

- (a) Describe the functions of packaging. 4
- (b) The illustration above shows the front and rear labels of a food product. Explain how well the labelling satisfies current legislative requirements. 8
- (c) Evaluate the suitability of two packaging materials for this product by addressing storage AND distribution. 8

**OR**

**Marks**

**Question 17 — Food Product Development (20 marks)**

- |   |          |
|---|----------|
| (a) Describe the features of a marketing plan.  | <b>4</b> |
| (b) Explain, using examples, how market concerns and consumer demands have driven the development of food products.                           | <b>8</b> |
| (c) For a product you have developed, describe marketing strategies and justify how these strategies will enhance the success of the product. | <b>8</b> |

## **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.

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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
- 

### **Contemporary Food Issues – Nutrition**

#### **Question 18** (15 marks)

Describe a strategy to promote optimum health through good nutrition for a specific group you have studied.

Evaluate the effectiveness of this strategy in addressing the nutritional considerations for this group.

**OR**

#### **Question 19** (15 marks)

Discuss the roles of dietary supplements and evaluate the benefits of their use in the Australian diet.

### **Contemporary Food Issues – Marketplace**

#### **Question 20** (15 marks)

Describe how health-enhancing foods and value-added convenience foods have led to changes in consumer health and traditional diets.

Discuss how the food industry has responded to the demand for these foods.

**OR**

#### **Question 21** (15 marks)

Discuss how a cradle-to-grave analysis of a food product can result in changes to the way it is produced, packaged and distributed to make it more environmentally acceptable.

**End of paper**

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