



BOARD OF STUDIES
NEW SOUTH WALES

HIGHER SCHOOL CERTIFICATE EXAMINATION

1998

FOOD TECHNOLOGY

2/3 UNIT (COMMON)

*Time allowed—Three hours
(Plus 5 minutes reading time)*

DIRECTIONS TO CANDIDATES

Section I (12 marks)

- Attempt ALL questions.
- Complete your answers in blue or black pen, or in pencil on the Answer Sheet provided.

Section II (48 marks)

- Attempt THREE questions.
- Questions 13 and 14 are COMPULSORY.
- Attempt EITHER Question 15 OR Question 16.
- Answer the questions in the spaces provided in this paper.
- Write your Student Number and Centre Number in the spaces provided on the first page of each question.

Section III (40 marks)

- Attempt TWO questions, ONE from each Part.
- Answer each question in a SEPARATE Writing Booklet.
- You may ask for extra Writing Booklets if you need them.

SECTION I

(12 Marks)

Attempt ALL questions.

Each question is worth 1 mark.

Select the alternative A, B, C or D that best answers the question.

Complete your answers in blue or black pen, or in pencil on the Answer Sheet provided.

1. Aseptic packaging involves
 - (A) separate sterilisation of the package and product.
 - (B) lamination of plastic packaging.
 - (C) sterilisation of the packaging only.
 - (D) sterilisation of the product itself.

2. Irradiation of food is NOT permitted in Australia because of
 - (A) the high costs involved.
 - (B) consumer concerns about safety.
 - (C) the poor quality of end-products.
 - (D) undesirable changes in taste and texture.

3. The traditional Aboriginal diet contains
 - (A) moderate levels of carbohydrate and low levels of fat.
 - (B) low levels of protein and carbohydrate.
 - (C) high levels of vitamins A and D.
 - (D) high levels of protein and fat.

4. Manufacturers are NOT required to list added colours for which of the following?
 - (A) Dried cake mix, coffee and biscuits.
 - (B) Pastry, ice-cream and salami.
 - (C) Soft drink, cordial and corn chips.
 - (D) Custard powder, sausage casings and confectionery.

5. Which Commonwealth statutory body processes changes to food standards?
- (A) The National Health and Medical Research Council.
 - (B) The Australia New Zealand Food Authority.
 - (C) The Fair Trade Council.
 - (D) The Consumer Claims Tribunal.
6. Tamper-evident packaging is designed to
- (A) reduce contamination at retail level.
 - (B) prevent microbial growth.
 - (C) contain the product adequately.
 - (D) aid distribution and storage.
7. The main role of food service providers is to
- (A) repair food processing equipment.
 - (B) manufacture convenience foods.
 - (C) provide ready-to-eat meals for consumers.
 - (D) advise primary producers on hygiene issues.
8. Which of the following aspects best characterises the Australian food industry?
- (A) Heavy reliance on imported raw materials.
 - (B) Absence of government regulations.
 - (C) Large ownership by multinationals.
 - (D) Export of high levels of processed products.
9. High-acid foods are those which
- (A) are not readily available.
 - (B) are always packaged in glass containers.
 - (C) should not be consumed by diabetics.
 - (D) are less prone to spoilage than other foods.

10. Quick or snap freezing results in
- (A) large ice crystals.
 - (B) small ice crystals.
 - (C) rapid bacterial growth.
 - (D) damage to cell walls.
11. Which of the following is an example of an extruded food product?
- (A) Pretzels
 - (B) Powdered milk
 - (C) Dried apples
 - (D) Brown bread
12. Retortable pouches are used in food packaging because they are
- (A) reusable and recyclable.
 - (B) less expensive than cans.
 - (C) able to be sterilised at high temperatures.
 - (D) durable and rigid.

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STUDENT NUMBER

CENTRE NUMBER

SECTION II

(48 Marks)

Attempt **THREE** questions.

Questions 13 and 14 are **COMPULSORY**.

Attempt **EITHER** Question 15 **OR** Question 16.

Answer the questions in the spaces provided.

Please turn over

QUESTION 13. Food Manufacture (16 marks)

For a processed food product you have studied, answer the following questions.

Name of the product

(a) What factors influence the selection of raw materials?

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(b) Describe TWO possible causes of spoilage.

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(ii)
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QUESTION 14. The Australian Food Industry (16 marks)

Select FOUR of the following social trends:

- multiculturalism
- working mothers
- increased population
- low income families
- higher levels of education.

Using relevant examples, discuss the influence of each of the four trends on the Australian food industry in the last fifty years.

(a) Social trend

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Question 14 continues on page 10

QUESTION 14. (Continued)

(b) Social trend

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(c) Social trend

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(d) Social trend

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Attempt EITHER Question 15 OR Question 16.

QUESTION 15. Food Marketing (16 marks)

Select ONE take-away food product from the list below:

- hamburger
- pizza
- fried chicken
- doner kebab.

Food product selected

(a) Outline FOUR possible promotional strategies for the food you have selected.

- (i)
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- (ii)
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- (iii)
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- (iv)
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Question 15 continues on page 12

QUESTION 15. (Continued)

(b) What factors influence the choice of these promotional strategies?

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(c) How could these strategies influence community health?

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(d) Describe TWO environmental issues that should be considered in marketing this product.

(i)
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(ii)
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Attempt EITHER Question 15 OR Question 16.

QUESTION 16. Food Product Development (16 marks)

The ‘Gobble-Up Biscuit Company’ has recently developed chocolate-coated biscuits shaped like popular cartoon characters.

(a) Identify FOUR reasons for the development of such a product.

- (i)
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- (ii)
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- (iii)
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- (iv)
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(b) Outline FOUR steps that would have been followed in the development of this product.

- (i)
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- (ii)
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- (iii)
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- (iv)
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QUESTION 16. (Continued)

(c) Suggest reasons why this product may fail in the marketplace.

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(d) Describe TWO tests the biscuits should undergo before product launch.

(i)

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(ii)

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SECTION III

(40 Marks)

Attempt TWO questions, ONE from each Part.

Each question is worth 20 marks.

Answer each question in a SEPARATE Writing Booklet.

Please turn over

PART A—CORE STRANDS

Attempt ONE question.

QUESTION 17. Food Manufacture

A deep-fried take-away food consisting of a savoury vegetable filling in a batter coating is targeted at spectators at the Sydney 2000 Olympic Games.

Ingredients of the product are wheat flour, water, potato, cabbage, carrots, salt and spices.

- (a) Outline the factors that need to be considered during the manufacture of this product.
- (b) Briefly discuss storage and distribution conditions to be used between manufacture and preparation for the consumer.
- (c) Describe the ecological concerns that may arise as a result of the manufacture and preparation of this product.

QUESTION 18. Food Manufacture

Food additives are used unnecessarily by food manufacturers.

Discuss this statement in relation to the role of additives in food products.

QUESTION 19. The Australian Food Industry

Select TWO recent innovations in the Australian food industry. For EACH innovation:

- (a) describe its nature and uses;
- (b) outline any disadvantages;
- (c) explain how changes in the marketplace have enabled the innovation to achieve success.

QUESTION 20. The Australian Food Industry

Discuss the impact of government policy and legislation on the Australian food industry.

PART B—OPTIONS

Attempt ONE question.

QUESTION 21. Food Marketing

Discuss marketing strategies that could be used to increase demand for THREE of the following food products.

- (a) Kangaroo meat
- (b) Reduced fat ice-cream
- (c) Flavoured popcorn
- (d) Smoked salmon
- (e) Focaccia

QUESTION 22. Food Marketing

Most food products have a limited life cycle. Discuss reasons for this and the role of food marketing in extending product life cycles.

QUESTION 23. Food Product Development

The general manager of your soft drink company has asked you to develop a chewable drink product. It may be eaten to quench thirst, or frozen and used as ice cubes in drinks. Discuss the development of this product in relation to THREE of the following steps.

- (a) Idea generation and screening
- (b) Market research
- (c) Cost feasibility
- (d) Prototype testing

QUESTION 24. Food Product Development

Health and nutrition issues, both perceived and real, are of major concern to food product developers. Explain the development of specific food products to satisfy this area of need.

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