

Food Technology

General Instructions

- Reading time – 5 minutes
- Working time – 3 hours
- Write using black or blue pen
Black pen is preferred
- Write your Centre Number and
Student Number at the top of
pages 9, 11, 13 and 15

Total marks – 100

Section I Pages 2–6

20 marks

- Attempt Questions 1–20
- Allow about 35 minutes for this section

Section II Pages 9–16

50 marks

- Attempt Questions 21–26
- Allow about 1 hour and 25 minutes for this section

Section III Page 17

15 marks

- Attempt Question 27
- Allow about 30 minutes for this section

Section IV Page 18

15 marks

- Attempt Question 28
- Allow about 30 minutes for this section

Section I

20 marks

Attempt Questions 1–20

Allow about 35 minutes for this section

Use the multiple-choice answer sheet for Questions 1–20.

- 1** Which active non-nutrient is a common component of yoghurt?

 - (A) Fibre
 - (B) Probiotics
 - (C) Anti-oxidants
 - (D) Phytochemicals

- 2** What has made it possible for supermarkets to sell fruit and vegetables which are up to 12 months old?

 - (A) Developments in storage
 - (B) Improvements in distribution
 - (C) Increased use of local suppliers
 - (D) Advances in genetic modification

- 3** Which of the following is an internal factor that influences the development of a new food product?

 - (A) Ecological setting
 - (B) Packaging materials
 - (C) Production facilities
 - (D) Technological environment

- 4** What is the main benefit to a company of using a line extension?

 - (A) Advertising costs are avoided.
 - (B) Staff members are kept focused and happy.
 - (C) The company is able to comply with legislation.
 - (D) The company has the opportunity to increase market share.

5 *Nose-to-tail* is a term that refers to the use of the whole animal in food production.

What are organisations that use a nose-to-tail approach most likely to be concerned about?

- (A) Cultural beliefs
- (B) Lifestyle changes
- (C) Waste minimisation
- (D) Special dietary needs

6 Hypoglycaemia is associated with which of the following conditions?

- (A) Obesity
- (B) Diabetes
- (C) Food allergies
- (D) Cardiovascular disease

7 A butcher is selling marinated beef strips.

The beef strips are an example of

- (A) a functional food.
- (B) a value-added food.
- (C) a new to world product.
- (D) a home meal replacement.

8 With which legislation must mobile food trucks in NSW comply in order to ensure food is safe for human consumption?

- (A) *Food Act 2003* (NSW)
- (B) *National Measurement Amendment Act 2013* (Cth)
- (C) *Food Standards Australia New Zealand Act 1991* (Cth)
- (D) *Protection of the Environment Operations Act 1997* (NSW)

- 9** Which of the following is an external factor which limits the use of biotechnology in food product development?
- (A) Profit margins
 - (B) Company image
 - (C) Personnel expertise
 - (D) Political environment
- 10** Which of the following has contributed most to decreased employment in the food retail sector?
- (A) Online shopping
 - (B) Self-serve checkouts
 - (C) Extended trading hours
 - (D) Greater availability of food items
- 11** The CSIRO has been investigating how active ingredients in wallaby milk may improve human nutrition.
- What is this an example of?
- (A) Quality management
 - (B) Consumer influences
 - (C) Research and development
 - (D) Compliance with legislation
- 12** Which of the following best illustrates a government initiative designed to promote nutritional health?
- (A) Subsidies for personal trainers
 - (B) Funding of workplace dieticians
 - (C) The Australian Dietary Guidelines
 - (D) The National Heart Foundation ‘tick’

- 13** Which step in food product development involves the pilot production of a food product?
- (A) Prototype development
 - (B) Product specifications
 - (C) Feasibility study
 - (D) Market research
- 14** Which is the main form of pricing currently being used as a marketing strategy by leading supermarket chains?
- (A) Price skimming
 - (B) Cost plus pricing
 - (C) Penetration pricing
 - (D) Competitive pricing
- 15** Which of the following is a functional food?
- (A) Soy and linseed biscuits
 - (B) Seedless watermelon
 - (C) Air popped popcorn
 - (D) Low fat milk
- 16** A company is mass-producing a pasta sauce using the following raw materials: tomatoes, onions, water and preservatives.
- Which of the following is another essential raw material used in this production?
- (A) Heat
 - (B) Glass jars
 - (C) Machinery
 - (D) Human labour

- 17 Banning the live export of cattle would create an opportunity for which sector of the Australian food industry?
- (A) Food retail
 - (B) Agriculture and fisheries
 - (C) Food service and catering
 - (D) Food processing/manufacturing
- 18 In which of the following do all of the foods require packaging in lacquered cans?
- (A) Peas, corn, fish
 - (B) Corn, berries, meat
 - (C) Berries, cherries, tomatoes
 - (D) Tomatoes, condensed milk, meat
- 19 Which of the following pieces of equipment is used for pasteurisation?
- (A) An atomiser
 - (B) An evaporator
 - (C) A tunnel oven
 - (D) A plate heat exchanger
- 20 The following processes are used to manufacture a product.

heating

grinding

sublimation

What is the product most likely to be?

- (A) Flour
- (B) Peanut butter
- (C) Instant coffee
- (D) Custard powder

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Centre Number

Section II

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Student Number

50 marks

Attempt Questions 21–26

Allow about 1 hour and 25 minutes for this section

Answer the questions in the spaces provided. These spaces provide guidance for the expected length of response.

Question 21 (12 marks)

Answer parts (a) and (b) in relation to an organisation within the Australian food industry.

Name of organisation:

- (a) Describe the level of operation and the type of mechanisation that exist in this organisation. 4

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Question 21 continues on page 10



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Centre Number

Section II (continued)

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Student Number

Question 22 (12 marks)

Answer parts (a), (b) and (c) in relation to a food product that you have developed.

Name of food product:

(a) Circle the type of food product development that best describes your product.

line extension

me too

new to world

Why does the food product you developed fall into this category?

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Question 22 continues on page 12

Question 22 (continued)

(b) Explain how each of the following influenced the development of your product.

(i) Idea generation and screening

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(ii) Testing of product prototype

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(c) Justify a place and distribution strategy for the marketing of your product.

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End of Question 22



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Centre Number

Section II (continued)

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Student Number

Question 23 (7 marks)

- (a) What are the causes of food deterioration and spoilage? 3

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- (b) Explain a preservation process that uses restriction of moisture to extend the shelf life of food. 4

Name of food preservation process:

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Question 24 (6 marks)

Compare the promotion of health foods with the promotion of fast foods.

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Centre Number

Section II (continued)

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Student Number

Question 25 (6 marks)

Explain what would need to be considered in the development of a vending machine for the sale of apples.

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Question 26 (7 marks)

- (a) What are the differences between a food allergy and a food intolerance? **4**

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- (b) Describe the economic costs associated with food allergies and food intolerances. **3**

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Food Technology

Section III

15 marks

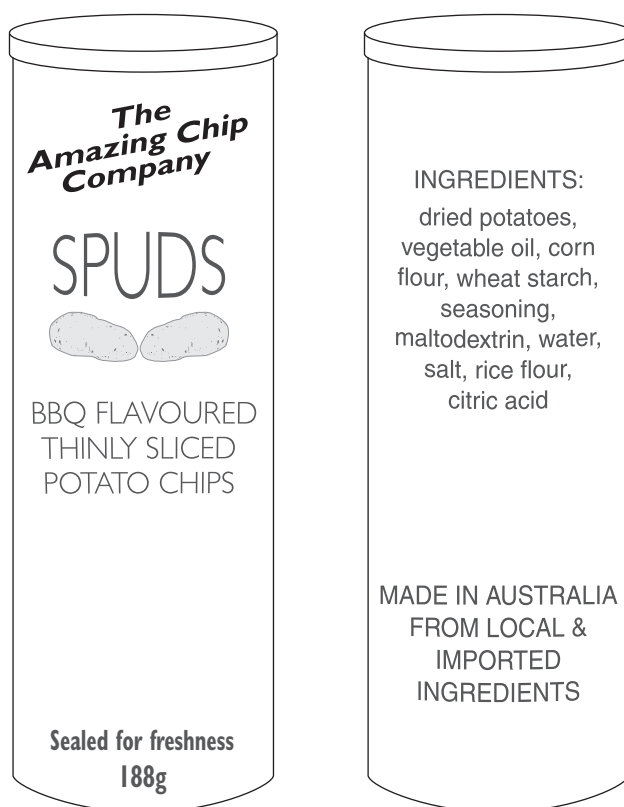
Attempt Question 27

Allow about 30 minutes for this section

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

Question 27 (15 marks)

Answer the following parts of this question in relation to the product shown.



- (a) Outline the functions of packaging in relation to this product. **3**
- (b) To what extent are the current legislative requirements for food labelling satisfied? **4**
- (c) Evaluate the success of current developments in packaging in extending the shelf life of this and other food products. **8**

Please turn over

Section IV

15 marks

Attempt Question 28

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:

- demonstrate knowledge and understanding relevant to the question
 - apply course concepts to food technology issues
 - communicate ideas and information using appropriate terminology and relevant examples
 - present a logical and cohesive response
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Question 28 (15 marks)

Analyse the effect that drivers of food product development have had on the nutritional status of Australians.

End of paper