



NSW Education Standards Authority

2018 HIGHER SCHOOL CERTIFICATE EXAMINATION

Food Technology

**General
Instructions**

- Reading time – 5 minutes
- Working time – 3 hours
- Write using black pen

**Total marks:
100**

Section I – 20 marks (pages 2–6)

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

Section II – 50 marks (pages 9–17)

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

Section III – 15 marks (page 33)

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

Section IV – 15 marks (page 34)

- 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 is the first step of the food product development process?
- A. Idea generation
 - B. Feasibility study
 - C. Market research
 - D. Product specifications
- 2** A food company is considering an emerging technology to improve the shelf life of a product.
- This is an example of
- A. quality assurance.
 - B. a level of operation.
 - C. a critical control point.
 - D. research and development.
- 3** In which of the following are BOTH factors economic costs most likely to be associated with malnutrition?
- A. Decreased taxes and change in diet
 - B. Increased medical costs and loss of income
 - C. Increased absenteeism at work and weight loss
 - D. Decreased health insurances and limited mobility
- 4** What is the most suitable level of operation for an independently-owned beachside cafe?
- A. Household
 - B. Multinational
 - C. Small business
 - D. Large company

- 5 Which system is used to package UHT milk?
- A. Active packaging
 - B. Aseptic packaging
 - C. Vacuum packaging
 - D. Modified atmosphere packaging

- 6 A soft-drink company packages its drinks with bottle tops that give consumers the chance to win a free product.

This is an example of

- A. a promotional program.
 - B. a step in product planning.
 - C. responding to consumer needs.
 - D. testing consumer acceptance of packaging.
- 7 In which of the following are all items examples of raw materials used in food manufacture?
- A. Heat, filtered water and salt
 - B. Steam, food additives and packaging
 - C. Ingredients, electricity and fortifying vitamins
 - D. Sterile packaging, refrigeration and detergents

- 8 Pre-packaged cauliflower rice is an example of a new food product in the marketplace.

What is a driver for this type of food product development?

- A. Feasibility
- B. Marketing
- C. Environment
- D. Convenience

- 9** Which of the following is an independent, not-for-profit, community-based organisation that promotes the health and wellbeing of all Australians?
- A. Nutrition Australia
 - B. The Australian Beverages Council
 - C. The Australian Institute of Food Safety
 - D. The Australian Food and Grocery Council
- 10** Vegans are at risk of malnutrition if their diet is lacking which of the following nutrients?
- A. Folate, calcium and iodine
 - B. Vitamin B12, iron and sodium
 - C. Vitamins A and D and magnesium
 - D. Dietary fibre and vitamins C and E
- 11** In order to prevent neural tube defects in infants, pregnant women are recommended to increase their intake of
- A. folate.
 - B. protein.
 - C. calcium.
 - D. vitamin D.
- 12** The distribution system for supplying online groceries includes both
- A. warehousing and market research.
 - B. transportation and sensory evaluation.
 - C. order processing and inventory control.
 - D. materials handling and raw materials specifications.

- 13** A stall-holder at a produce market only uses ingredients sourced from within a 50 km radius.

What are the reasons for sourcing ingredients in this way?

- A. Promoting the company image and technological environment
 - B. Supporting local employment and reducing environmental impact
 - C. Increasing convenience and using available processing equipment
 - D. Improving local employment opportunities and working conditions
- 14** Who authorises registration of a food safety program and allows a food business to open?
- A. FSANZ
 - B. Local council
 - C. State government
 - D. Federal government
- 15** In which of the following are all of the processes listed used to physically clean raw materials in a food production plant?
- A. Grinding, sieving and immersion
 - B. Aspiration, filtration and blanching
 - C. Sieving, high pressure spraying and flotation
 - D. Grading, sorting and high temperature sterilisation
- 16** To which area of the Australian food industry do the following four qualities apply: strong, hygienic, durable and efficient?
- A. Processing techniques and equipment
 - B. Principles of food preservation and equipment
 - C. Critical control points and functions of packaging
 - D. Functions of packaging and principles of food preservation

- 17** In general, which drink is the best option for athletes to use to rehydrate?
- A. Water
 - B. Isotonic drink
 - C. Coconut water
 - D. Electrolyte drink
- 18** Initial product planning requires manufacturers to do which of the following?
- A. Comply with the Food Code and develop an online presence
 - B. Analyse the product life cycle and establish the distribution system
 - C. Be aware of market competitors and understand their target market
 - D. Conduct market research and improve the staff working conditions
- 19** A tubular heat exchanger is used to cook
- A. breads and cakes.
 - B. cereals and muesli.
 - C. pasta and couscous.
 - D. chutneys and sauces.
- 20** In which of the following are both products most likely to be the cause of an anaphylactic reaction?
- A. Gluten and milk
 - B. Seafood and sesame seeds
 - C. Shellfish and phytochemicals
 - D. Peanuts and red food colouring

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Centre Number

Food Technology
Sections II, III and IV
Answer Booklet

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Student Number

Instructions

- Write your Centre Number and Student Number at the top of this page
- Use this answer booklet for Sections II, III and IV
- Follow the instructions inside this booklet as to where you should write your answers

Please turn over

Section II

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 (4 marks)

- (a) How are food additives identified on a food label? 1

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- (b) Complete the following table. 3

<i>Additive</i>	<i>Use</i>
.....	Inhibits the growth of bacteria and mould in foods.
.....	Absorbs moisture from the atmosphere and prevents food from drying out.
.....	Allows oil and water to be combined in a product so that they do not separate during storage.

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Question 22 (6 marks)

- (a) Identify a value added potato-based product that exists in the marketplace. How does this product meet consumer demand? **2**

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- (b) Explain how consumers are protected by food labelling laws. Support your answer with examples. **4**

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Question 23 (9 marks)

- (a) Develop a one-day meal plan that includes a variety of menu items that have active non-nutrients.

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Breakfast
Lunch
Dinner
Other

- (b) Explain the roles of TWO of the active non-nutrients in the menu items identified in part (a).

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Question 24 (12 marks)

(a) What are the causes of food spoilage for TWO of the following products?

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- Apples
- Fish
- Milk

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Question 24 continues on page 14

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Question 25 (7 marks)

A food manufacturer has developed a range of ice-cream products based on their biscuit range. These are to be sold in packets of four in the freezer section of the supermarket.

- (a) Describe the type of food product development this represents. **2**

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- (b) Identify a potential target market for the new range of ice-cream products and justify your answer. **2**

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- (c) Justify a suitable pricing structure to be used when launching this product. **3**

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Question 26 (12 marks)

- (a) Discuss the ethical issues related to different advertising campaigns that target children’s diet and health. Use relevant examples to support your answer.

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Question 26 continues on page 17

Question 26 (continued)

- (b) Explain dietary disorders that children may experience when consuming a high energy diet.

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End of Question 26

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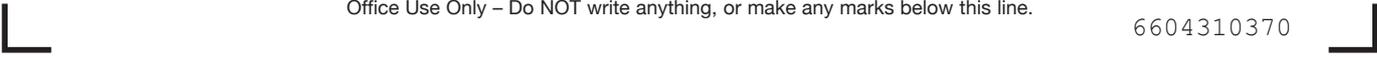
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If you require more space to answer Question 28, you may ask for an extra writing booklet.

If you have used an extra writing booklet for Question 28, tick here.

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Food Technology

Section III

15 marks

Attempt Question 27

Allow about 30 minutes for this section

Answer the question on pages 18–24 of the Sections II, III and IV Answer Booklet. Extra writing booklets are available.

Question 27 (15 marks)

You are planning to establish a food van to sell a range of hot foods at a music event.

- (a) Describe the production systems that would be used in the food van. **3**
- (b) Outline the work health and safety issues associated with working in the food van. Support your answer with relevant examples. **4**
- (c) Analyse BOTH the macro and micro environments that will influence the sale of food from the van. Use examples to support your answer. **8**

Please turn over

Section IV

15 marks

Attempt Question 28

Allow about 30 minutes for this section

Answer the question on pages 25–31 of the Sections II, III and IV Answer Booklet. Extra writing booklets are available.

Your answer 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)

Evaluate how ONE organisation within the Australian food industry influences individuals, society and the environment.

End of paper