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External Assessment 2022

# FOOD AND NUTRITION

FDN315118

Section **A**

Pages 12

Questions 7

**Preparation time for this exam:** 15 minutes

**Suggested working time:** 45 minutes

**Instructions:**

- There are **two (2)** parts to this section:
  - **Part 1** – answer **all** questions and **all** items within each question
  - **Part 2** – answer **one (1)** question.
- Write your answers in the spaces provided in this exam paper.
- The exam is **three (3)** hours in length. The suggested working time is provided in the instructions for each part.
- All answers must be written in **English**.
- You **must** make sure your answers address:
  - Criterion 4 describe the relationship between nutrition, food and health.

**Marker Use**

**C4**

**/ 45**

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# Guide to Exam Structure

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		Parts	Questions available	Questions to answer	Suggested working time	Marks available
<b>Section A</b>	Part 1		6	6	25 minutes	25
	Part 2		1	1	20 minutes	20
<b>Section B</b>	Part 1		1	1	25 minutes	25
	Part 2		1	1	20 minutes	20
<b>Section C</b>			2	1	45 minutes	Assessed using extended ratings of: A+ to z
<b>Section D</b>	Part 1		3	3	10 minutes	10
	Part 2		1	1	35 minutes	35 and A+ to z
<b>Totals</b>			<b>15</b>	<b>14</b>	<b>180 minutes (3 hours)</b>	<b>135 and A+ to z rating</b>

# Part 1

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- Answer **all** questions in this part.
  - This part is worth 25 marks and it is suggested that you spend **approximately 25 minutes** on this part.
  - This part assesses **Criterion 4**.
- 

## Question 1

a) Explain the difference between energy dense foods and nutrient dense foods, using examples.

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Marker use

2

b) Define the term Basal Metabolic Rate (BMR).

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2

c) State **two (2)** factors which can increase an individual's BMR.

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1

Part 1 continues

Question 2

a) What are essential amino acids?

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b) Apart from providing energy, list **two (2)** functions of protein in the body.

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2: .....  
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c) Give **one (1)** example of **two (2)** foods which provide complementary protein when eaten together.

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**Question 3**

a) Explain why a person on a vegan diet is at higher risk of iron deficiency than a person on a diet which includes meat.

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b) Why are women at higher risk of iron deficiency than men?

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c) List **two (2)** symptoms of iron deficiency.

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**Question 4**

Which **two (2)** of the following nutrients are recommended to be increased during pregnancy and why?

4

(Vitamin C, Calcium, Sodium, Folate, Carbohydrate)

Nutrient 1:.....

Reason:.....

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Nutrient 2:.....

Reason:.....

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Part 1 continues

Part 1 continued

Marker use

Question 5

a) State **one (1)** symptom of iodine deficiency.

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b) Name **one (1)** rich food source of iodine.

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c) Explain the interrelationship of Vitamin D and **one (1)** other micronutrient in forming bones.

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Question 6

Choose **one (1)** of the following non-nutrients:

- antioxidants
- probiotics
- phytoestrogens.

Identify **two (2)** health benefits of consumption and **two (2)** natural food sources of this non-nutrient.

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Total P1

25

# Part 2

- Answer the question in this part.
- This part is worth 20 marks and it is suggested that you spend **approximately 20 minutes** on this part.
- This part assesses **Criterion 4**.

## Question 7

a) Identify **three (3)** dietary reasons for the high incidence of obesity in Australian children.

1: .....

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2: .....

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3: .....

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b) Explain how a diet that is high in animal fat may contribute to the development of heart disease. Include food examples in your answer.

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Marker use

3

4

Question 7 continues

**Question 7 continued**

Marker use

c) Explain how each of the following strategies may be effective in reducing a person's risk of developing heart disease:

6

- Increasing the consumption of wholegrain cereal products such as oats.

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- Limiting the consumption of anchovies, feta cheese, salami and potato crisps.

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- Increasing the consumption of grilled fish.

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d) Explain how each of the following strategies may be effective in managing Type 2 diabetes:

4

- Reducing carbohydrate foods high in disaccharides and replacing with high fibre carbohydrate foods.

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**Question 7 continues**

**Question 7 continued**

Marker use

- Limiting consumption of fatty foods.

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- e) Name **one (1)** health promotion organisation and outline their role in the prevention of diet related disease.

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3

**Total P2**

20

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End of Section A



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External Assessment 2022

# FOOD AND NUTRITION

FDN315118

Section **B**

Pages 12

Questions 2

**Suggested working time:** 45 minutes

**Instructions:**

- There are **two (2)** parts to this section:
  - **Part 1** – answer **all** questions and **all** items within each question
  - **Part 2** – answer **one (1)** question.
- Write your answers in the spaces provided in this exam paper.
- The exam is **three (3)** hours in length. The suggested working time is provided in the instructions for each part.
- All answers must be written in **English**.
- You **must** make sure your answers address:
  - Criterion 5 analyse diets using Nutrient Reference Values and recognised food selection tools.

**Marker Use**

C5 / 45

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# Guide to Exam Structure

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	Parts	Questions available	Questions to answer	Suggested working time	Marks available
Section A	Part 1	6	6	25 minutes	25
	Part 2	1	1	20 minutes	20
Section B	Part 1	1	1	25 minutes	25
	Part 2	1	1	20 minutes	20
Section C		2	1	45 minutes	Assessed using extended ratings of: A+ to z
Section D	Part 1	3	3	10 minutes	10
	Part 2	1	1	35 minutes	35 and A+ to z
<b>Totals</b>		<b>15</b>	<b>14</b>	<b>180 minutes (3 hours)</b>	<b>135 and A+ to z rating</b>

# Part 1

- Answer **all** questions in this part.
  - Refer to the data provided below in your answers to this part.
- This part is worth 25 marks and it is suggested that you spend **approximately 25 minutes** on this part.
- This part assesses **Criterion 5**.

## Section B Data

### Tom - Documents

General
Foods
NRVs/Goals
Notes

Name:

Id:  Alt.Id:

Folder: Documents ▼ ...

Based on: Food Record ▼ ...

Age (Years):  Activity: Light ▼ ...

Gender: Male ▼ PAL: 1.60

Weight (kg):  Pregnancy:   ▼

Height (cm):   Lactating

BMI: 29

Calculate Energy Requirement using: NRV Equations ▼

Estimated Energy Requirement (EER): 14210 kJ

Basal Metabolic Rate (BMR): 8881 kJ

### Tom - Documents

General
Foods
NRVs/Goals
Notes

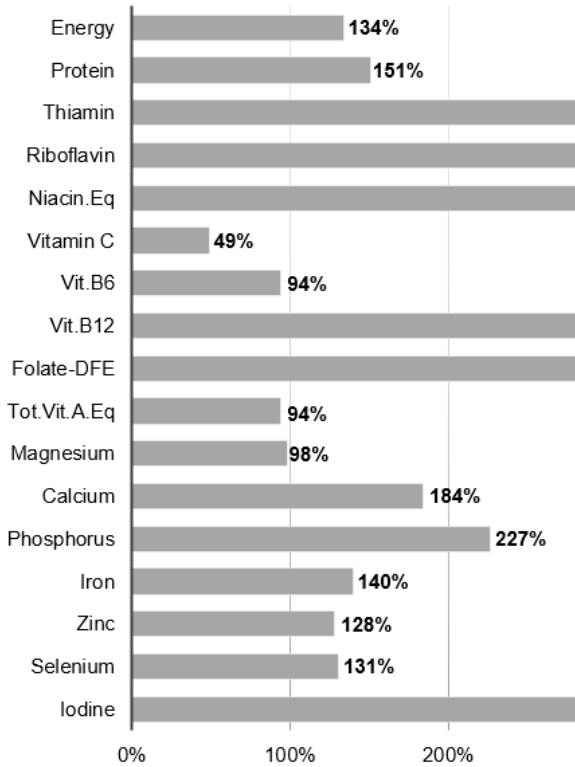
↺
↻
Outline

Day	Meal	Food	Quantity
☐ 22-Apr-22			
	☐ Breakfast		
		Coles Corn Flakes	2 cup
		Milk,cow,ready to drink,regular fat,regular	2 cup
	☐ Morning tea		
		Doughnut,unfilled,iced,chocolate flavour	1 regular round doughnut
		Coca - Cola	375 mL
	☐ Lunch		
		Sandwich,with vegemite & cheese,fresh	2 sandwich
		Farmers Union Iced Coffee One	600 mL
	☐ Afternoon tea		
		Arnott's Shapes Originals - Barbecue	150g
		Water,tap	1 cup
	☐ Dinner		
		Lasagne,beef,homemade,without vegetables	500g
		Bread,garlic,commercial	2 regular slice
		Coca - Cola	375 mL

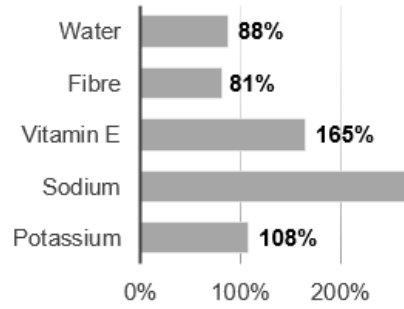
**Section B Data continues**

**Section B Data continued**

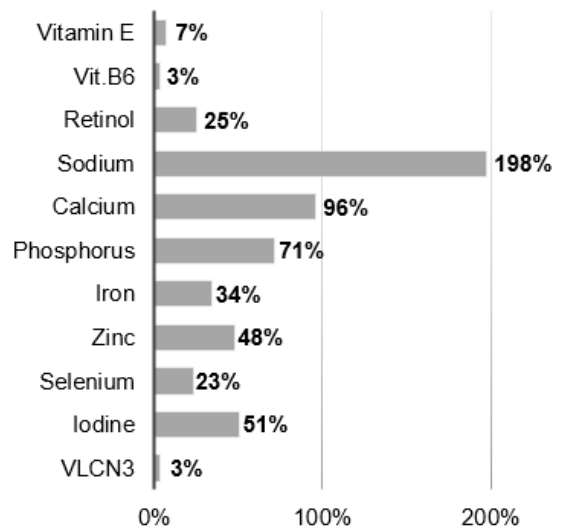
**RECOMMENDED DIETARY INTAKES (RDI)**



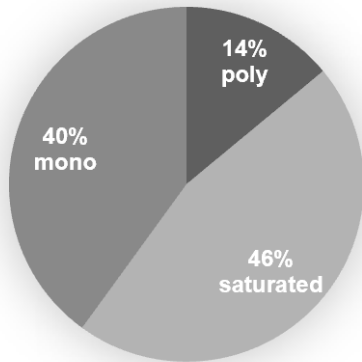
**ADEQUATE INTAKE (AI)**



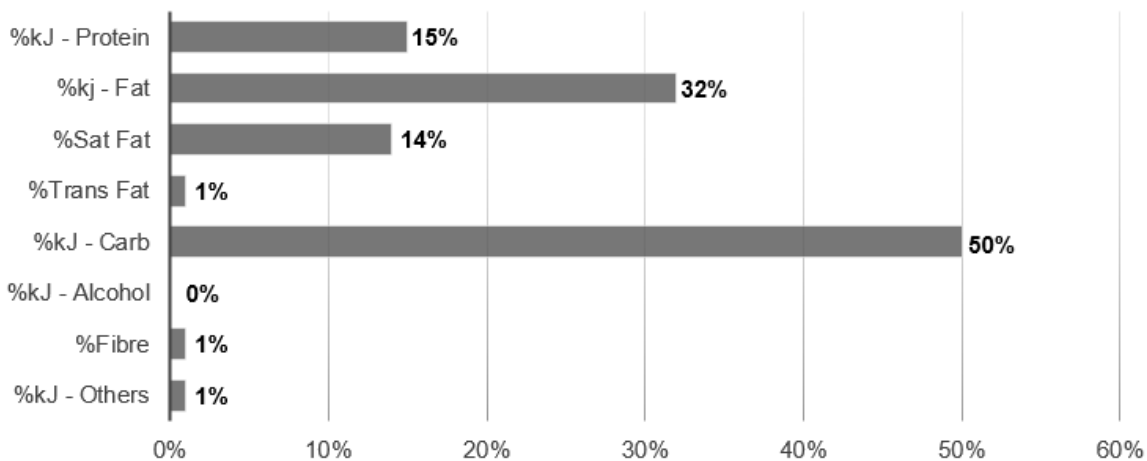
**UPPER LEVEL OF INTAKE (UL)**



**RATIO POLY, MONO AND SATURATED FATS**



**RATIO ENERGY FROM PROTEIN, FAT, CARBOHYDRATE AND ALOCHOL**



**Question 8**

Marker use

- a) Compare Tom's energy intake with the recommended intake and determine the long-term outcome if this continues.

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- b) Refer to the ratio energy graph. How does Tom's fat intake compare to the acceptable macronutrient distribution range (AMDR)?

2

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- c) Refer to the ratio fats pie chart. How should Tom's fat intake be adapted to comply with nutrition recommendations?

2

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**Question 8 continues**

**Question 8 continued**

Marker use

d) Refer to the ratio energy graph and Tom's daily food intake. Discuss the amount and the type of carbohydrates Tom consumes. Suggest how this can be adapted to comply with nutrition recommendations.

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e) Assess Tom's water intake and list **two (2)** symptoms he is likely to experience from this level of intake.

3

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f) Compare Tom's fibre intake with the NRV.

1

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g) Explain **two (2)** ways that soluble fibre can help prevent constipation.

4

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2: .....

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**Question 8 continues**

**Question 8 continued**

Marker use

h) Suggest **two (2)** foods Tom could add to his diet to increase his intake of insoluble fibre.

1

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i) i. Which micronutrient is Tom consuming at a level likely to cause adverse health effects?

1

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ii. Identify **two (2)** adverse health effects of consuming an excess of the above micronutrient.

2

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iii. List **two (2)** foods in Tom's diet which contain large amounts of the above micronutrient.

2

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j) Tom is deficient in Vitamin C. Explain why eating a salad would be a more effective way to add Vitamin C to his diet than eating a plate of boiled vegetables.

2

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**Total P1**

25

# Part 2

- Answer **all** questions in this part.
  - Refer to the data provided in Part 1 in your answers to Part 2.
- This part is worth 20 marks and it is suggested that you spend **approximately 20 minutes** on this part.
- This part assesses **Criterion 5**.

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## Question 9

a) Explain why the Australian Dietary Guidelines (ADG) for Australians are a more reliable source of nutrition advice than a diet Tom might find on the internet.

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Marker use

3

b) The Australian Dietary Guidelines (ADG) guideline 2 states: 'Enjoy a wide variety of nutritious foods from all food groups'. As part of this guideline, it is recommended that individuals eat plenty of vegetables, including different types and colours.

i. How many serves of vegetables should Tom be consuming daily?

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1

ii. Suggest **four (4)** ways Tom could introduce or swap more fruit and vegetables into his daily food intake.

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4

**Question 9 continues**

Question 9 continued

Marker use

iii. List **three (3)** health benefits for Tom from eating more vegetables.

1: .....

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2: .....

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3: .....

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3

c) Tom consumes too many discretionary foods. Explain why discretionary food is not an essential component of the dietary guidelines recommended by the Australian Government.

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3

d) The Australian Dietary Guidelines (ADG) guideline 3 recommends to “limit intake of foods containing saturated fat, added salt, added sugars and alcohol”. Provide **three (3)** ways Tom can adjust the lasagne recipe below in order to comply with guideline 3.

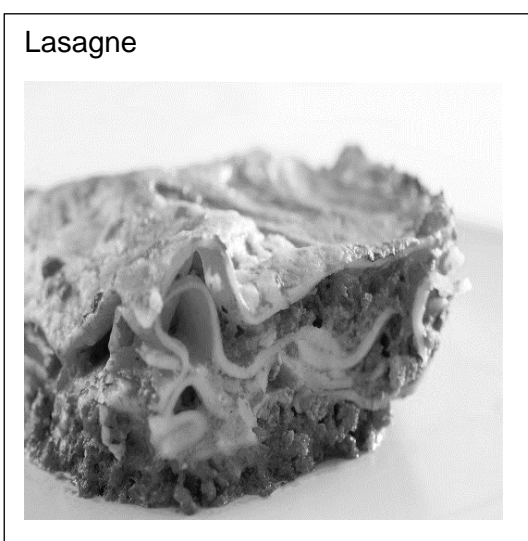
Lasagne recipe ingredients:  
**Meat sauce:**

- 2 Tbsp oil
- 500g beef mince
- 1 onion
- 1 clove garlic
- 400g tin tomato soup

**Cheese Sauce:**

- 120 butter
- ¼ cup plain flour
- 2 cups milk
- 1 cup grated cheddar cheese

6 Lasagne sheets  
1 cup grated cheddar cheese for topping



Question 9 continues

**Question 9 continued**

Marker use

Provide <b>three (3)</b> ways Tom can adjust the lasagne recipe in order to comply with guideline 3.	Explain how each change meets guideline 3.
Change 1	
Change 2	
Change 3	

6

**End of Section B**

**Total P2**

20



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# FOOD AND NUTRITION

FDN315118

Section **C**

Pages 12

Questions 2

**Suggested working time:** 45 minutes

**Instructions:**

- Answer **one (1)** question in **extended written response**.
- Write your answers in the spaces provided in this exam paper.
- The exam is **three (3)** hours in length. It is suggested that you spend **approximately 45 minutes** in total answering the question in this section.
- All answers must be written in **English**.
- You **must** make sure your answers address:
  - Criterion 2 communicate ideas and information in a variety of forms
  - Criterion 8 identify and analyse food related issues.

Marker Use	
C2	/ alpha
C8	/ alpha

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# Guide to Exam Structure

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	Parts	Questions available	Questions to answer	Suggested working time	Marks available
Section A	Part 1	6	6	25 minutes	25
	Part 2	1	1	20 minutes	20
Section B	Part 1	1	1	25 minutes	25
	Part 2	1	1	20 minutes	20
Section C		2	1	45 minutes	Assessed using extended ratings of: A+ to z
Section D	Part 1	3	3	10 minutes	10
	Part 2	1	1	35 minutes	35 and A+ to z
<b>Totals</b>		<b>15</b>	<b>14</b>	<b>180 minutes (3 hours)</b>	<b>135 and A+ to z rating</b>

- Answer **one (1)** question in an extended written response, either Question 10 **or** 11.
    - Communicate ideas and information in the form of extended written expression.
    - Use structured paragraphs and sentences, which must be written in a logical, coherent manner, using specialised terminology and appropriate English grammar.
    - Provide clear and reasoned arguments supported by examples.
  - It is suggested that you spend **approximately 45 minutes** on this section.
  - This section assesses **Criterion 2 and Criterion 8**.
- 

### Question 10

Write an extended response to all of the following:

- Explain the term 'food security'.
- Discuss barriers to food security and why some groups of people are at higher risk of food insecurity during a Pandemic.
- Identify and evaluate **two (2)** interventions, programs or initiatives that are designed to address food insecurity, explaining the strategies used to achieve their aims. Draw **one (1)** example from a developing country and **one (1)** from Australia.

**OR**

### Question 11

Write an extended response to all of the following:

- Explain the term 'ecological sustainability'.
- Discuss the environmental issues that affect the sustainability of **one (1)** of the following types of food production: growing crops, or raising livestock, or fishing. Describe **one (1)** strategy that has been designed or is being developed to address these issues.
- Identify and evaluate **three (3)** ways consumers can support ecological sustainability in their choice and use of food products.













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End of Section C



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# FOOD AND NUTRITION

FDN315118

Section **D**

Pages 12

Questions 4

**Suggested working time:** 45 minutes

**Instructions:**

- There are **two (2)** parts to this section:
  - **Part 1** – answer **all** questions and **all** items within each question
  - **Part 2** – answer **one (1)** question.
- Write your answers in the spaces provided in this exam paper.
- The exam is **three (3)** hours in length. The suggested working time is provided in the instructions for each part.
- All answers must be written in **English**.
- You **must** make sure your answers address:
  - Criterion 2 communicate ideas and information in a variety of forms
  - Criterion 6 analyse factors affecting food choice.

Marker Use	
C2	/ alpha
C6	/ 45

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# Guide to Exam Structure

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	Parts	Questions available	Questions to answer	Suggested working time	Marks available
Section A	Part 1	6	6	25 minutes	25
	Part 2	1	1	20 minutes	20
Section B	Part 1	1	1	25 minutes	25
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<b>Totals</b>		<b>15</b>	<b>14</b>	<b>180 minutes (3 hours)</b>	<b>135 and A+ to z rating</b>

# Part 1

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- Answer **all** questions in this part.
  - This part is worth 10 marks and it is suggested that you spend **approximately 10 minutes** on this part.
  - This part assesses **Criterion 6**.
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## Question 12

a) Explain **two (2)** ways food packaging can influence an individual's specific food choice.

1: .....

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2: .....

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Marker use

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## Question 13

Explain **one (1)** reason why the Australian diet has become more varied in the past 50 years. Include food examples to demonstrate your answer.

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Part 1 continues

**Part 1 continued**

**Question 14**

Describe how **one (1)** existing nutrition-related health promotion strategy aims to have a positive impact on food selection.

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Marker use

3

**Total P1**

10

# Part 2

- Answer **the** question in this part.
  - You must reference Food Choice factors in your response.
- This part is worth 35 marks and it is suggested that you spend **approximately 35 minutes** on this part.
- This part assesses **Criterion 2 and Criterion 6**.

Marker use

## Question 15

### Scenario

Anna is a single parent on Centrelink payments who lives in a small rural town which has one (1) small grocery store.

Bea is Anna's 14-year-old daughter who travels an hour by bus to the regional high school. She often stays over at her friends' houses who enjoy cooking Asian food. Bea and her friends spend a lot of time on social media together.

Cy is Anna's 11-year-old son who attends the local primary school and plays several sports. He is lactose intolerant and does not like foods with strong aromas.

Don is Anna's 80-year-old neighbour who has lived alone for many years but is quite active in the local community. He values the environment, does not like waste and produces his own vegetables and eggs.

Refer to the scenario above in your response to the following:

- Evaluate the likely impact of **three (3)** different **economic** factors on Anna's selection of food. Include examples of how these **economic** factors may lead to specific food choices.
- Evaluate the likely impact of **three (3)** different **social** factors on Bea's selection of food. Include examples of how these **social** factors may lead to specific food choices.
- Evaluate the likely impact of **three (3)** different **physiological** factors on Cy's selection of food. Include examples of how these **physiological** factors may lead to specific food choices.
- Evaluate the likely impact of **three (3)** different **psychological** factors on Don's selection of food. Include examples of how these **psychological** factors may lead to specific food choices.

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End of Section D

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