2025 ASSESSMENT REPORT
FDN315118 FOOD AND NUTRITION

General Comments

The 2025 Food and Nutrition examination showed a broad range of student achievement. Many students demonstrated a solid understanding of key concepts and responded well to the requirements of each question, particularly when applying core knowledge to familiar contexts. Stronger responses were clearly structured, used appropriate terminology and showed an ability to explain or analyse when required.

Common challenges included misinterpreting command terms, relying on simple descriptions and providing responses that lacked depth. Some students also experienced time management difficulties, which led to incomplete answers.

To support improved performance, teachers may wish to continue focusing on explicit teaching of question interpretation, practising the use of key terms and developing students' ability to extend responses and apply knowledge to varied scenarios.

Section A – Criterion 4

General Comments

Section A assessed Criterion 4 with an emphasis on how nutrition, food choices and health outcomes are connected.

Stronger responses typically demonstrated the ability to:

- accurately identify and describe key nutrients, their roles and common food sources
- explain how nutrients interact within the body and influence health
- analyse the consequences of nutrient excesses or deficiencies
- describe major diet-related conditions and outline relevant contributing factors.

Students were rewarded for responses that were precise, relevant and supported by credible nutrition evidence, including guidance from NHMRC and AIHW. Clear communication and sound scientific reasoning were central to achieving higher marks.

Section A Part 1

Question 1

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

Successful responses included:

- the rate of energy required for metabolic processes while at rest
- the minimum amount of energy required for the body's metabolic processes to sustain life at rest.

(1 mark)

b. List **three (3)** factors that contribute to your BMR. Use dot points.

Some students incorrectly listed exercise or physical activity as a factor affecting BMR. Activity contributes to total *energy expenditure*, not basal metabolic rate, unless referenced in terms of long-term changes to muscle mass.

Successful responses included:

Age, sex, body size, body composition (muscle mass increases BMR), hormonal status (e.g., thyroid hormones), genetics, growth periods (childhood, adolescence, pregnancy), illness/fever, environmental temperature.

(1 mark)

c. Deep fried potato chips are more energy dense than steamed potato with skin on, for same weight.

Students generally answered this question well. Strong responses correctly defined energy density and explained that fat absorption during frying increases kilojoules per gram.

i. Explain what the term energy dense means.

Successful responses included:

Energy density refers to the number of kilojoules per gram of the food (kJ/g). The more kilojoules per gram, the higher the energy density.

(1 mark)

ii. In terms of energy density, provide **two (2)** reasons why the statement "Deep-fried potato chips are more energy dense than steamed potato with skin on, for the same weight." would be true.

Successful responses included:

- When deep frying chips they absorb fat/oil. Fat contains 37 kJ per gram, raising the energy density (kilojoules per gram).
- Steamed potato with the same weight has no fat/oil added therefore they have a lower energy density (kilojoules per gram).

  Acceptable variations: Frying adds fat; chips lose water during frying which concentrates energy; steamed potatoes have no added fat; skin increases fibre and reduces kJ per gram.

(2 marks)

Question 2

a. What are essential fatty acids?

Successful responses included:

- Essential fatty acids are also called polyunsaturated fats, these are fats that the body can't make/synthesise itself (omega 3 & 6), therefore need to be included in the diet.
- Essential fatty acids are fats that the body cannot make and must be obtained from food.

(1 mark)

b. Fats and/or lipids are found in many places in our food and exist in different states and types. For Trans fats, state **two (2)** facts as well as **two (2)** food sources.

Trans fats:

i. **Two (2)** Facts

Successful responses included:

Increases LDL cholesterol, decreases HDL cholesterol, increases risk of heart disease, created through hydrogenation, used extensively in the food industry, often found in commercial foods, known as trans fatty acids, used mainly for deep frying and shortening in baking.

(2 marks)

ii. **Two (2)** Sources

Successful responses included:

- deep-fried foods (e.g., chips, French fries)
- commercial baked goods (e.g., pastries, pies, cakes, biscuits)
- processed snack foods (e.g., crackers, microwave popcorn)

(1 mark)

c. Other than the role it plays in relation to heart disease, list **two (2)** other roles of fat in the diet. Use dot points.

Successful responses included:

- Most concentrated source of energy (37 kJ per grams)
- Provides insulation and protects organs
- Helps regulate metabolic processes and cell signalling
- Increases the absorption of fat-soluble vitamins (A, D, E, K)
- Essential structural component of cell membranes
- Contributes to the flavour, palatability and satisfaction of food

(can lead to other diet related conditions, type 2 diabetes, overweight and obesity)

(1 mark)

Question 3

a. Describe the role of Vitamin D in bone health.

Successful responses included:

Vitamin D helps with absorption and metabolism of calcium and phosphorus and hence helping with formation of bones and teeth (calcium is essential for bones and teeth).

(1 mark)

b. Explain why the following groups have specific requirements for vitamin D:

i. Adolescents:

Most students recognised that both adolescents and older adults have increased vitamin D needs, but many responses lacked detail about why these requirements differ. Stronger answers linked vitamin D to its role in calcium absorption and bone health across the lifespan.

Successful responses included:

- During adolescence there is an increased need for vitamin D and calcium due to rapid growth and development of bones and teeth.
- Prevention of rickets.
- Needed for peak bone mass and supporting skeletal growth.

(1 mark)

ii. Elderly:

Successful responses included:

- Older adults need more vitamin D because it helps the body absorb calcium and phosphorus, which become harder to absorb with age.
- Vitamin D supports bone strength by improving calcium and phosphorus absorption, helping reduce the risk of osteoporosis in the elderly.

(1 mark)

c. Other than fish, provide 2 dietary sources of vitamin D.

Some students listed dairy products such as cheese, butter or yoghurt. These responses were accepted, as older textbooks often refer to dairy foods as vitamin D sources. However, teachers and students should be aware that the naturally occurring vitamin D content in most dairy products is very minimal and is not considered a significant source in the Australian context unless the product is fortified.

Successful responses included:

Egg yolks, fortified spreads/margarine, fortified milk, fortified cereals and UV-exposed (sunlight) mushrooms.

(1 mark)

Question 4

a. List **two (2)** roles of calcium in the diet.

Some students included rickets as a condition prevented by calcium. While rickets involves poor bone mineralisation, it is caused by a vitamin D deficiency, not a lack of calcium. Teachers may wish to continue reinforcing the difference between nutrients that contribute to bone structure (calcium) and those that assist with calcium absorption (vitamin D).

Successful responses included:

Creates hard structure of bones and teeth, muscle contraction, nerve functioning, blood clotting, prevention of osteoporosis.

(1 mark)

b. Use the table below to list 2 good dietary sources of calcium for the different types of food sources.

Successful responses included:

- animal-based sources: milk, cheese, yoghurt, fish, fish bones, insects
- plant based sources: fortified plant milks, tahini, sesame seeds, almonds, kale, Bok choy, broccoli, and legumes such as white beans and black beans.

(2 marks)

c. Traditional diets contained more calcium than modern diets. Explain why.

Some strong responses explained that while some modern foods are fortified with calcium, these products may not be consumed consistently or in sufficient amounts to match the naturally higher calcium intake seen in traditional diets.

Successful responses included:

- Traditional diets relied heavily on whole foods and fresh dairy products such as milk, yoghurt, and cheese, which naturally contain high levels of calcium. Because these foods were consumed regularly and in their natural state, calcium intake was often higher than in modern diets.
- People following traditional diets typically did not avoid dairy or restrict entire food groups. This made it easier to meet calcium needs compared with some modern dietary patterns, such as vegan diets, which exclude dairy and require careful planning to obtain equivalent calcium from plant-based sources.
- Traditional diets often included regular dairy consumption, such as daily milk provided through the school milk program. This meant children routinely consumed calcium-rich foods, contributing to higher overall calcium intake compared with many modern diets.

(2 marks)

Question 5

a. List **four (4)** foods that are high in sodium and should be avoided where possible.

Successful responses included:

Processed foods, pizza, potato crisps, cold meats such as salami, canned soups, bottle sauces, salty snacks, some cheese, condiments, fast food e.g. KFC burger.

(1 mark)

b. Explain why iodine is important in a child's diet.

Most students were able to identify that iodine is required for healthy thyroid function and for preventing goitre. A number of responses also recognised its importance for growth and development in children. Overall, students performed well on this question despite it being less commonly applied in a child-focused context.

Successful responses included:

- supports normal thyroid gland function through the production of thyroid hormones
- helps prevent goitre caused by iodine deficiency
- essential for healthy growth and brain development in children.

(1 mark)

c. Explain why folate is so important in the diet of pregnant women.

Most students correctly identified folate's role in preventing neural tube defects, which was the most common and accurate response. Some students also recognised its importance for cell division, DNA synthesis and red blood cell formation.

Successful responses included:

- helps prevent neural tube defects such as spina bifida and anencephaly
- required for the formation of red blood cells
- needed for DNA synthesis and cell division
- helps prevent megaloblastic anaemia during pregnancy.

(1 mark)

Question 6

a. Explain the role of dietary antioxidants.

Most students were able to describe the basic role of antioxidants in protecting cells from free radical damage. Stronger responses linked this to reduced disease risk, while weaker answers tended to list unrelated health claims.

Successful responses included:

- act as scavengers of substances called free radicals, which can damage body cells
- help protect the body from cell damage that contributes to some cancers and lifestyle diseases
- support the body's natural defence systems
- help reduce oxidative damage linked to ageing and some chronic conditions.

(1 mark)

b. Name **three (3)** different types of foods as sources of antioxidants.

Successful responses included:

Fruits (must be specific, e.g. blueberries), vegetables (must be specific e.g. kale), nuts, wholegrains, red wine, dark chocolate, green tea.

(1 mark)

c. Other than antioxidants, list **two (2)** other types of non-nutrients which are useful in the human diet.

Successful responses included:

Phytoestrogens and probiotics.

(1 mark)

Section A Part 2

Question 7

a. From the graph in Figure 1, explain what impact socio-economic status has on overweight and obesity rates in adults. Suggest how this relates to the subsequent health status.

Students found this question challenging, partly due to the unfamiliar graph format and because socio-economic status is not a concept typically emphasised in this section of the course. Stronger responses identified clear trends in the data and linked these patterns to health outcomes such as the increased risk of cardiovascular disease and type 2 diabetes. Many students, however, had difficulty interpreting the graph accurately or making a clear connection between the SES patterns and subsequent health status.

Successful responses included:

- Adults in the lowest socio-economic group (Group 1) have the highest obesity rates (35%). Because obesity is a major risk factor for conditions like cardiovascular disease and type 2 diabetes, this group is more likely to experience poorer health outcomes.
- Adults in the highest socio-economic group (Group 5) have the lowest obesity rates (25%) but the highest overweight rates (37%). Being overweight still increases the risk of diseases such as heart disease and diabetes, so this group may also experience negative health effects, though typically less severe than those seen with obesity.
- The combined overweight and obesity rate is slightly higher in the lowest socio-economic group (65%) than in the highest group (61%) but is highest overall in the middle group (Group 3) at 69%. Higher rates of overweight and obesity across these groups contribute to increased risk of chronic diseases, including CHD and type 2 diabetes.

(4 marks)

b. Explain **three (3)** dietary factors that increase risk of overweight and obesity in adults.

Most students were able to identify at least one dietary factor linked to overweight and obesity. Stronger responses explained how each factor contributes to excess kilojoule intake and clearly linked this to the storage of adipose tissue. Weaker responses tended to list factors without explaining the underlying mechanism.

Successful responses included:

- Energy imbalance: Adults who consume more kilojoules than they use through BMR and activity will store the excess energy as adipose tissue, leading to weight gain and increased risk of overweight and obesity.
- High intake of energy-dense foods: Foods high in fat (37 kJ/g), such as butter, chocolate, cream, and cheese, or energy-dense drinks like alcohol (29 kJ/g), contribute

large amounts of kilojoules in small portions, increasing the likelihood of excess energy intake.

- Low fibre intake: Fibre promotes satiety and helps control appetite. Diets low in fibre can lead to overeating and excess kilojoule consumption, increasing the risk of overweight and obesity.
- Overconsumption of discretionary foods: Sweet or salty foods (e.g., lollies, chocolate, crisps/chips) may encourage overeating due to their palatability, contributing to an energy surplus and weight gain.

(3 marks)

c. List **three (3)** risk factors for heart disease.

Most students were able to list three correct risk factors for heart disease. Many students showed strong content knowledge though their answers often included additional detail beyond what was required.

Successful responses included:

High blood pressure, high cholesterol, high LDL levels, low HDL levels, diets high in saturated or trans fats, high sodium intake, being overweight or obese, diabetes, and lack of physical activity.

(1 mark)

d. Outline the balance of low-density lipoproteins (LDL) and high-density lipoproteins (HDL) needed to reduce the risk of heart disease. Indicate how the required level of LDLs can be achieved through diet, including specific examples.

Most students were able to identify that reducing LDL and increasing HDL lowers heart disease risk. Stronger responses addressed both lipoproteins and provided specific dietary examples of how to lower LDL, as required by the question.

A common misconception was the belief that individuals eat LDL or HDL cholesterol. Students should understand that the body produces LDL and HDL in response to the types of fats consumed, and that dietary choices influence these levels indirectly through their impact on liver function and lipid metabolism.

Successful responses included:

- A healthy balance requires low LDL and high HDL to reduce heart disease risk. LDL can be lowered by reducing saturated and trans fats in the diet, such as cutting back on butter, cream and commercial baked goods and replacing them with monounsaturated fats like olive oil or avocado.
- To reduce heart disease risk, the aim is to keep LDL levels low and HDL levels high. This can be achieved by limiting foods high in saturated fat (e.g., pork crackling, cheese) and choosing polyunsaturated fats instead, such as oily fish or vegetable oils.
- Heart disease risk is reduced when LDL is kept low and HDL is increased. LDL can be lowered through diet by avoiding trans fats found in processed snacks and choosing healthier fats like those in nuts, seeds and salmon.

(4 marks)

e. Explain how increasing the consumption of grilled fish in the diet can assist in reducing the incidence of heart disease.

Students who performed well clearly linked omega-3 intake to improved cholesterol balance and reduced cardiovascular risk. Strong responses also noted that grilling is a healthier cooking method because it avoids adding extra saturated fats. Some weaker responses did not specify omega-3 or did not explain the benefit of grilling.

Successful responses included:

- Increasing grilled fish intake provides omega-3 polyunsaturated fats, which help raise HDL and lower LDL, reducing the risk of heart disease. Grilling also avoids adding extra saturated fat, helping keep cholesterol levels lower.
- Eating more grilled oily fish increases heart-protective omega-3 fatty acids, which help remove LDL from the bloodstream through increased HDL activity. Preparing fish by grilling instead of frying lowers overall fat intake and supports improved cardiovascular health.

(3 marks)

f. Type 2 diabetes is another consequence of being overweight or obese. Define type 2 diabetes and include **two (2)** current Australian statistics.
Outline **one (1)** promotion strategy that might reduce the incidence.

Many students were able to define type 2 diabetes, most students identified a promotion strategy, but explanations were sometimes brief or not clearly linked to reducing type 2 diabetes.

Successful responses included:

Definition:

Diabetes is a chronic health condition marked by high blood glucose levels (hyperglycaemia). This occurs due to an inability to produce insulin/enough insulin or inability to use insulin effectively (cells have become resistant). Insulin is a hormone made by the pancreas that enables glucose to move from the blood into the cells.

Statistics (only need 2):

- approximately 1.2 million Australians or 4.6% of the population have this condition
- type 2 diabetes accounts for 85-90 percent of all diabetes
- more than 1.3 million (1 in 20) Australians were living with diabetes in 2021
- diabetes contributed to 11% of all deaths in 2022
- 10% of total hospitalisations (1.2 million) were associated with diabetes in 2021-22. (AIHW, viewed 2025).

One promotion strategy:

For example:

- The Health Star Rating System helps people choose healthier foods by showing a star rating on the front of packets. Products with more stars usually have less added sugar and more fibre. Using this system can encourage people to buy lower-GI, healthier options, which can help reduce the risk of developing type 2 diabetes.
- Following the Australian Dietary Guidelines helps lower the risk of type 2 diabetes by encouraging people to eat more vegetables, whole grains and high-fibre foods, and to

limit foods high in added sugar and saturated fat. These dietary patterns assist with weight management, improve blood glucose control and reduce the likelihood of developing type 2 diabetes.

- Swap It, Don't Stop It is a national campaign that encourages people to make simple, healthier swaps, such as swapping sugary drinks for water or swapping high-fat foods for lower-fat options. These swaps help reduce energy intake, lower overall sugar consumption and promote healthier eating patterns. By making these small, achievable changes, adults can better manage their weight and reduce their risk of developing type 2 diabetes.

(5 marks)

Section B – Criterion 5

General Comments

Section B of the TASC Food and Nutrition exam assessed Criterion 5, focusing on the ability to analyse diets using Nutrient Reference Values (NRVs) and recognised food selection tools. High-standard responses:

- analysed dietary data by comparing it to NRVs and drawing logical conclusions
- evaluated diets using the Australian Dietary Guidelines to assess nutritional adequacy
- recommended and justified dietary modifications aligned with these frameworks.

Marks were awarded for detailed analysis and clear, evidence-based recommendations grounded in NRVs and the Australian Dietary Guidelines.

Section B Part 1

Question 8

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

Most students answered this question well, demonstrating the ability to interpret the data and recognise the long-term impact of overconsuming kilojoules. Stronger responses noted that Samantha is already overweight with a BMI of 26.6 and correctly identified that a likely consequence is further weight gain or obesity, rather than becoming overweight.

Successful responses included:

Samantha consumes 157% of her Estimated Energy Requirement (10,835 kJ), placing her in a significant positive energy balance. If this pattern continues long-term, she will gain additional weight as her BMI is 26.6, increasing her risk of progressing to obesity. This further elevates the risk of type 2 diabetes, cardiovascular disease, and hypertension.

(2 marks)

b. Refer to Figure 6 and 7. Compare Samantha's intake of Protein, Fat and Carbohydrate with nutrition recommendations.

Well answered by most students, who correctly listed the AMDR ranges for carbohydrates, fat and protein, along with Samantha's percentage intake for each.

Successful responses included:

- Carbohydrates: Within the AMDR (48.1%, recommended 45–65%).
- Fat: Within the AMDR (31.4%, recommended 20–35%).
- Protein: Below the AMDR (11.8%, recommended 15–25%).

(3 marks)

c. Based on findings from part b), make **one (1)** important recommendation for a change to Samantha's diet and justify your recommendation.

A common misconception was assuming Samantha needed more protein because her AMDR percentage was 11.8%. In reality, her protein intake is sufficient, and the lower percentage reflects her excess total energy intake, not inadequate protein. Students should recognise that improving Samantha's diet would involve reducing high-kilojoule discretionary foods, rather than increasing protein. Some students also attempted to analyse Samantha's sodium intake; however, this was not awarded marks as no sodium data appear in Figures 6 or 7.

Successful responses included:

- Figure 6 shows Samantha's total energy intake is extremely high. She should reduce discretionary, high-kilojoule foods such as soft drink, chocolate milk, ice cream and sausage rolls. Reducing these foods will lower her total energy intake and help rebalance the proportions of nutrients.
- Her saturated fat intake is above recommendations (16.76%). Samantha should limit foods high in saturated fat, such as fried rissoles, pastry-based items and full-fat dairy. Replacing these with lean proteins or lower-fat alternatives would help reduce LDL cholesterol and improve heart health.
- A suitable change would be replacing pastry-based snacks with wholegrain options or fresh fruit. This reduces energy density and saturated fat while increasing fibre, which supports satiety and improves diet quality.

(3 marks)

d. Carbohydrates vary in type, quality and their contribution to a healthy diet.
Explain this statement in terms of the information provided about Samantha's carbohydrate intake and determine the short-term and long-term consequences of the carbohydrates she is consuming.

Overall, a poorly answered question. Marks were awarded for identifying carbohydrate foods in Samantha's diet, which many students missed. Most students could correctly identify consequences of the current carbohydrate intake; however, a common misconception was mentioning weight gain as a short-term consequence.

Successful responses included:

Carbohydrates vary in type and quality. Wholegrain, high-fibre carbohydrates have a low GI and release energy slowly. These are complex carbohydrates known as polysaccharides.

Simple carbohydrates, including monosaccharides and disaccharides, have a high GI, causing rapid rises in blood glucose. Samantha eats mostly high-GI, refined and sugary carbohydrates such as soft drinks, chocolate milk, ice cream and chocolate sauce.

- **Short-term:** rapid blood sugar changes, poor concentration and fatigue
- **Long-term:** high-GI, low-fibre choices increase the risk of weight gain, type 2 diabetes and heart disease.

(4 marks)

e. Provide **three (3)** suggestions as to how Samantha's diet could be adapted to include healthier carbohydrates.

Well answered. Full marks were awarded for three improvements that increased fibre, wholegrain or low GI choices or reduced added sugars.

Successful responses included:

- Choose a wholegrain or low-GI breakfast option such as oats or multigrain toast instead of Rice Bubbles.
- Add vegetables as snacks (e.g., carrot sticks with hummus) instead of relying on sugary foods.
- Replace chocolate milk and soft drink with water or a fruit-and-yoghurt smoothie to reduce added sugars.

(3 marks)

f.

i. Referring to Samantha's diet, list **four (4)** food and beverage items that would contribute to Samantha's water intake. Use dot points.

Well answered. Marks were awarded for listing foods or drinks that contain water. These did not need to be "good" sources, as the question simply asked for any sources of water.

Successful responses included:

Milk at breakfast, chocolate milk at morning tea, soft drink at lunchtime, sushi rice, green tea energy drink, mashed potato, boiled carrot, peas, gravy.

(2 marks)

ii. Evaluate **one (1)** beverage from your previous answer as a source of water in the diet, adding **two (2)** suggestions for improved choices. Use dot points.

Many students did not evaluate a beverage from the prior question. Only beverages were accepted as the question specified. Most students were able to name two improved choices.

Successful responses included:

- **If the student evaluates milk:**
  - Milk provides water and hydrates well, but it is higher in kilojoules and is not always ideal as the main hydration source
  - Better alternatives: water, reduced-fat milk.
- **If the student evaluates chocolate milk:**

- Chocolate milk provides water but is high in added sugar, which adds unnecessary kilojoules
- Better alternatives: water, plain milk.

- **If the student evaluates soft drink:**
  - Soft drink provides water but contains very high amounts of added sugar, contributing excess kilojoules and poor dental health
  - Better alternatives: water, sparkling water, water with fruit flavouring.
- **If the student evaluates green tea energy drink:**
  - Provides water but may contain caffeine, sugar and additives, which are not ideal for hydration
  - Better alternatives: water, plain milk, kombucha, mineral water, freshly squeezed orange juice with pulp, soda water.

(3 marks)

g.

i. Is there sufficient calcium in Samantha's diet?

This question was generally well answered. Normally students would be expected to refer to data; however, as this was required in the following question, it was not needed here.

Successful responses included:

No.

(1 mark)

ii. What fact in the data supports this? Explain in dot points where this comes from in the diet.

Well answered by most students. Some students confused the data with the UL.

Successful responses included:

- The graph shows Samantha consumes only around 80% of the RDI for calcium and about 84% of the EAR
- Sources of calcium in her diet are: milk, chocolate milk, ice cream.

(2 marks)

h. Identify whether or not Samantha's fibre intake is sufficient.

Generally well answered, however some students may have misread this question because the RDI chart scales to 100 percent and the EAR chart scales to 200 percent, making the EAR bar appear higher even though her intake is below both recommendations.

Successful responses included:

No. Figure 6 shows she consumes 21.18 g of fibre, which is 96% of the AI, so it is slightly below the recommended level.

(1 mark)

i. List **two (2)** possible consequences of Samantha not including enough fibre in her diet.

A common misconception was listing lack of fibre as a cause of irritable bowel syndrome (IBS), which did not gain marks. A lack of fibre does not cause IBS, but it can worsen

symptoms in some individuals. If students identified that low fibre intake may exacerbate IBS symptoms, marks were awarded.

Successful responses included:

- sluggish digestion
- constipation
- increases the risk of bowel cancer, obesity and type 2 diabetes
- poor satiety, which may lead to overeating
- increased risk of diverticular disease.

(1 mark)

Section B Part 2

Question 9

a.

i. How many serves of cereals and grains should Samantha be consuming each day?

A mark was awarded for either seven grains (appropriate for an 18-year-old) or six grains (appropriate for the 19- to 50-year-old recommendation).

Successful responses included:

- 7 serves or
- 6 serves.

(1 mark)

ii. Identify the grains and cereals Samantha has consumed.

Successful responses included:

- Rice Bubbles (made from rice)
- sushi rice.

(1 mark)

iii. Evaluate the foods in part a) ii in terms of their nutritional value in terms of the recommendation to **'Choose mostly whole foods or minimally processed foods'**.

This question was very poorly answered. Better responses referenced the loss of the bran and germ, reductions in micronutrients, changes to glycaemic response and the impact on fibre intake. Some students evaluated foods from the prior question that were incorrect, which meant their justification was also incorrect. Others evaluated foods that they had not listed previously. Many responses were very generalised.

Successful responses included:

Samantha's grain choices are all refined grains, which means the bran and germ have been removed, lowering fibre and micronutrient content.

- Rice Bubbles are ultra-processed and rapidly digested, contributing little fibre or sustained energy.
- Sushi rice is also refined, offering limited B-vitamins, magnesium and fibre compared with wholegrain alternatives.

Overall, these foods do not meet ADG2, which recommends mostly wholegrain or high-fibre grain foods to support stable glycaemic responses, gut health and adequate micronutrient intake.

(5 marks)

iv. Suggest **four (4)** ways that Samantha could introduce or swap more grain and cereals into her daily food intake. Use dot points.

Most students could identify ways to incorporate more grains into Samantha's diet. Better responses demonstrated an understanding of why wholegrains are beneficial, for example slower digestion and higher micronutrient density.

Successful responses included:

- Replace Rice Bubbles with oats, bran cereals or wholegrain muesli, providing more fibre and B-vitamins
- Swap the pastry for wholegrain bread, crackers or a wholegrain wrap, improving fibre and reducing saturated fat intake
- Choose brown rice or quinoa instead of white sushi rice to boost fibre, antioxidants and slower-digesting carbohydrates
- Include wholegrain pasta or barley in lunch or dinner to support better glycaemic control and increased satiety.

(4 marks)

v. List 3 benefits for Samantha of increasing her grain and cereal intake.

Well answered. Listing three valid benefits received full marks. No explanation required. Some students listed "more energy", which was not awarded marks.

Successful responses included:

- improved gut health from higher fibre
- increased satiety
- more sustained energy across the day
- better micronutrient intake (e.g., B-vitamins, iron, magnesium).

(3 marks)

b. The Australian Dietary Guideline (ADG) 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 of different types and colours.
Suggest three (3) ways that Samantha could alter the following recipe for savoury mince.
Use the table on the following page to record your responses.

Most students succeeded in identifying three alterations that would increase the nutrition of the recipe. Adjustments gained marks if they would increase the range of vegetables in or the nutrition of the recipe. Justification needed to relate to ADG 2 (enjoying a wide variety of nutritious foods from all food groups). A justification could only gain marks once.

Successful responses included:

Provide three (3) ways Samantha can adjust the recipe for savoury mince in order to increase the range of vegetables and improve the nutritional value.	**Explain how each change meets guideline 2.**
Add extra vegetables such as capsicum, zucchini, mushrooms (UV irradiated) or spinach into the mince.	This increases the variety and colour within the recipe and meets ADG 2 by expanding the range of vegetables consumed. UV irradiated mushrooms are high in vitamin D.
Replace a portion of the mince with lentils or finely chopped vegetables such as grated carrot, celery or sweet potato.	This increases vegetable and legume intake, improves fibre and micronutrients (vitamin A for carrots), and aligns with ADG 2 by encouraging a wider variety of nutritious foods.
Use a vegetable-rich tomato base, such as tinned tomatoes combined with grated or diced vegetables instead of relying only on mince or commercial sauces.	This increases the vegetable content of the recipe and meets ADG 2 by increasing vegetable serves within the dish.
Using ½ cup of fresh tomato instead of commercial tomato paste.	This introduces fruit to the dish, adhering to guideline 2 which encourages foods from all food groups.
Replace the mince with lean beef mince.	This adheres to guideline 2 as lean meats are recommended under this group to reduce saturated fat intake.

(6 marks)

Section C – Criterion 2 and 8

General Comments

Section C of the 2025 TASC Food and Nutrition examination assessed **Criterion 2** (communication of ideas and information) and **Criterion 8** (identifying and analysing food-related issues) through two extended-response questions:

- **Question 10: Food Security**
- **Question 11: Ecological Sustainability**

Students were required to answer **one** question.

As in previous years, a notable proportion of students relied on pre-prepared essays. This was especially evident when memorised content did not fully align with the specific requirements of the question chosen. Students who performed most strongly adapted their knowledge to the exact wording of the prompt, addressed all components, and demonstrated applied understanding rather than reproducing generic material.

Criterion 2 – Communicating Ideas and Information

Characteristics of High-Scoring Responses

High-quality essays consistently demonstrated:

- a clear and logical structure, including an introduction, well-organised paragraphs and a concise conclusion
- coherent development of ideas that addressed **all** parts of the question
- effective use of specialised terminology relevant to the Food and Nutrition course
- fluent written expression with correct spelling, grammar and sentence structure
- purposeful use of topic sentences to guide readers through their argument
- integration of well-chosen examples and evidence
- direct engagement with the key terms of the question rather than general discussion.

Rating	Expression	English usage	Use of terminology	Structure
A	Clearly and accurately conveys ideas and information in a logical, coherent manner.	English usage is correct including grammar, spelling of technical/ specialised terms, punctuation, accurate sentence structure and effective use of paragraphs.	Correctly uses specialised terminology when discussing food and nutrition issues.	Sophisticated introduction, body paragraphs and conclusion. Skilful use of topic sentences.
B	Clearly and accurately conveys ideas and information in a logical manner.	English usage is correct including grammar, spelling, punctuation, sentence structure and use of paragraphs.	Correctly uses terminology when discussing food and nutrition issues.	Uses introduction, body paragraphs and conclusion. Uses topic sentences.
C	Conveys ideas and basic information in a logical manner.	Produces written work in which basic English usage is correct, including grammar, spelling of common words, simple punctuation, sentence structure and use of paragraphs.	Correctly uses basic terminology when discussing food and nutrition issues.	Very basic introduction, paragraphs and simple conclusion.
t	Attempts to convey ideas and information, but response is incoherent or disjointed.	Numerous errors in spelling, grammar, simple punctuation and sentence structure.	Incorrectly uses or does not use basic terminology in discussion of food and nutrition issues.	Limited use of paragraphs. Missing introduction and/or conclusion. No clear structure to response.

Common issues

Some essays lacked a conclusion, used overly long paragraphs or relied on informal language (e.g., “kids,” “chucked,” “&”). A small number of students used arrows or dot points, which are not appropriate for extended written responses.

Criterion 8 – Identifying and Analysing Food-Related Issues

Across both questions, many students demonstrated foundational understanding. However, responses would have benefited from deeper analysis, clearer explanations and more targeted use of examples.

A number of students relied on memorised material, which limited their ability to address the **specific** requirements of Question 10 and Question 11. Stronger responses selected appropriate examples, explained cause-and-effect relationships and used relevant data to justify points.

Overall Comments for Section C

- Many students structured their essays well, with clear introductions and paragraphs. Some long paragraphs should have been divided for clarity.
- Students must avoid informal language, abbreviations without explanation, dot points and arrows.
- Stronger responses used evidence, examples and data to strengthen arguments.
- Students benefitted from essays that were directly shaped by the question rather than pre-prepared responses.
- The food security question required students to address numerous detailed subparts which limited the depth that could reasonably be demonstrated across all components.
- The ecological sustainability question aligned more closely with course content and was interpreted with greater confidence.
- Some students attempted to incorporate memorised information rather than applying knowledge to the food system focus required.

Section C Questions

Question 10 – Food Security

(Defines food security and identifies components; examines each component; identifies barriers; explains short- and long-term impacts for children; suggests a strategy; connects food security with ecological sustainability.)

Definition of Food Security

Most students could define food security; however, many provided only a partial definition or listed components without explanation. Stronger responses:

- gave the full definition (“all people, at all times…”)
- correctly identified three, four or five pillars
- explained each pillar in their own words
- distinguished between food security and food insecurity.

Some students simply copied the definition from the stimulus without demonstrating understanding.

Examination of Components

Students who performed well:

- described each component (availability, access, utilisation and sometimes stability)
- explained specific conditions experienced by food-insecure individuals
- used examples (e.g., supermarket shortages, drought, transport limitations, lack of clean water, inadequate kitchen facilities).

Less successful responses:

- repeated the pillar name without explanation
- focused narrowly on nutrition knowledge under “utilisation”
- did not use examples or failed to describe conditions clearly.

Risk Factors and Barriers

Strong responses:

- identified and explained multiple barriers such as climate change, conflict, crop failure, financial barriers, market disruptions, political instability, high food costs and geographic isolation
- linked barriers to specific pillars of food security
- used data or case studies from Australia or developing countries.

Common issues:

- listing barriers without explanation
- using overly generalised statements
- providing barriers unrelated to food security.

Short- and Long-Term Impacts on Children

This part was often poorly addressed. Many students:

- provided limited detail
- described impacts in adults rather than children
- repeated the same point in different wording.

Stronger responses explained:

- short-term: hunger, poor concentration, lower energy, increased illness
- long-term: impaired growth, reduced cognitive development, poorer educational outcomes, higher risk of chronic disease in adulthood.

Strategies to Improve Food Security in Children

Answers varied widely. Strong responses:

- suggested realistic, targeted strategies (e.g., breakfast programs, subsidised school meals, food vouchers)
- explained how the strategy would reduce food insecurity for children.

Weaker responses:

- suggested personal strategies (“meal prepping”, “grow your own food”)
- provided no explanation or relevance to children.

Connection Between Food Security and Ecological Sustainability

This final component was frequently missed or given minimal attention. Stronger essays:

- recognised that long-term food security depends on sustainable management of natural resources
- connected environmental practices to future food availability
- mentioned waste reduction, climate impacts, soil health or sustainable production systems.

Many weaker responses briefly stated that “they are linked” without explaining how or why.

Question 11 – Ecological Sustainability

(Defines ecological sustainability; explains the structure of the food system; discusses three barriers; explains technology, education and government policy responses.)

Definition of Ecological Sustainability

Few students provided a complete definition. Strong responses:

- described maintaining resources and ecosystems so future generations can meet their needs
- linked sustainability explicitly to the food system.

Weaker responses:

- provided vague statements
- used unrelated SDG material
- mentioned environmental issues without defining ecological sustainability.

Structure of the Food System

Stronger responses:

- explained production, processing, distribution and consumer practices
- provided both global and Australian examples
- included data or case studies.

Common difficulties:

- listing stages without explanation
- failing to give examples
- adding irrelevant pre-prepared paragraphs (especially about SDGs).

Barriers to the Food System

Most students could list barriers such as land degradation, food waste, packaging, chemical use, climate change, supply chain disruptions or geographic isolation. High-scoring responses:

- explained how each barrier affects sustainability
- connected barriers to food availability or environmental impacts.

Weaker responses tended to list barriers without linking them to the food system.

Technology, Education and Government Policy

Stronger responses:

- allocated one paragraph to each
- explained how each addressed specific barriers
- linked improvements to food security (e.g., better storage reducing waste; policies protecting water systems; education improving sustainable consumption).

Weaker responses:

- missed one or more of the three categories
- explained strategies without linking them to sustainability or food security.

Section D – Criterion 2 and 8

Section D Part 1

Question 12

Explain the difference between hunger, appetite and satiety.

Many students answered this question well and were able to provide accurate definitions which demonstrated the difference between each term.

Successful responses included:

- Hunger is a physiological need driven by the body's need for energy and nutrients and can be felt by growling stomach, empty feeling, low energy and concentration.
- Appetite on the other hand is a desire to eat whether hungry or not. It can be triggered by hunger but also by sensory reactions and psychological factors such as emotional and social factors.
- Satiety is the opposite of hunger and is a sense of feeling full after eating adequate amounts of food.

(3 marks)

Question 13

What is the role of marketing in consumer food selection?

Many students were able to successfully identify the role of marketing, using key terms such as to influence or persuade. Stronger responses also included relevant examples to demonstrate understanding of marketing, such as toys in McDonalds Happy Meals, Milo's sponsorship of junior cricket or the use of colour and packaging styles to appeal to specific audiences.

Successful responses included:

Marketing influences consumer food choices by shaping preferences and encouraging the purchase of certain foods through advertising, promotions, packaging, pricing, product placement or sponsorship.

(1 mark)

Question 14

a. List **two (2)** of the goals of a Health Promoting Framework.

   Although many students attempted this question and provided plausible responses related to health promotion, very few referred to specific Health Promoting Frameworks. A wide range of responses were accepted which included legitimate goals, including those drawn from the Working in Health Promoting Ways framework (Tasmania), or general health promotion frameworks (e.g. Ottawa Charter) along with any accurate general health-promotion goals.

   Successful responses included:

   Provides a structural approach to improving population health; addresses social, economic and environmental factors; helps build public policy; creates supportive environments; strengthens community action; develops personal skills; improves access to information and resources that support healthy choices; empowers individuals and communities to take

control of their health; reduces prevalence of diet-related conditions; enhances community wellbeing.

(2 marks)

b. Choose one of the not-for-profit health programs listed below and explain their role in contributing to community health.

Most students were able to identify key roles of a program, with stronger responses demonstrating more detailed knowledge and including more examples of the specific services, resources and campaigns offered.

Successful responses included:

- National Heart Foundation – To reduce heart disease and improve the heart health and quality of life of all people in Australia through prevention, support, care, advocacy and research. They run programs such as Jump Rope for Heart to promote physical activity in children and provide resources, guidelines and community campaigns that raise awareness and reduce risk factors such as high blood pressure.
- Diabetes Australia – Diabetes Australia works to raise awareness about the seriousness of diabetes, promote prevention and early detection strategies and advocate for better standards of care. They develop and deliver support, coordinated care and prevention services and are also a significant financial contributor to research into better treatments for diabetes and the search for a cure.
- Nutrition Australia – Promotes positive and evidence-informed food and nutrition messaging to all Australians, including individuals, educators, community groups and government bodies. They maximise impact through partnerships and collaboration and promote nutritious, affordable and sustainable food environments. Nutrition Australia maintains transparency and independence from industry, which is important for accuracy and honesty in the information it shares. They run an annual awareness campaign, National Nutrition Week, to promote and inspire healthy eating.

(2 marks)

c. Explain **one (1)** of the following health promotion strategies and briefly evaluate it.

Most students selected the Health Star Rating and were able to describe the key features of the strategy. Stronger responses included accurate detail and provided an evaluation by outlining the strengths of the strategy or noting its challenges and limitations.

Successful responses included:

The Health Star Rating (HSR) system rates the nutritional profile of packaged food and gives each product a rating from 0.5 to 5 stars. The more stars, the healthier the choice. The rating is calculated by food manufacturers then displayed on the front label of packaged foods. It is an easy and consistent way for shoppers to compare similar packaged foods, especially for those who may struggle to understand a Nutrition Information Panel. However, as ratings are assigned by the manufacturers, and it is not a mandated system it is not entirely reliable.

(2 marks)

Section D Part 2

General Comments

Criterion 2

High scoring responses for Criterion 2:

- were organised into clear, concise paragraphs, with each sub-factor addressed separately
- clearly defined each sub-factor and explained its relevance to the case study, demonstrating a strong understanding of how theoretical concepts apply in practice
- contained well structured paragraphs, with adequate spacing and key terminology used appropriately to enhance readability
- used consistently accurate spelling, grammar, sentence structure and punctuation
- used full words rather than abbreviations, ensuring clarity and professionalism
- contained key terminology such as physiological, psychological, social, values and beliefs, and these were spelled correctly, applied accurately, and used consistently
- used sophisticated language and were written in complete sentences, contributing to a polished and coherent response.

It is not necessary for students to include an introductory paragraph or conclusion in this section. Unlike Section C, these do not add information that can earn marks and may reduce the time available for addressing the required content.

Criterion 6

High scoring responses for Criterion 6 included:

- accurate identification of the correct sub-factor within the broader factor discussed, such as recognising values as a psychological factor
- a detailed evaluation of the sub-factor by defining, explaining and justifying it in relation to factors influencing food choice. The strongest responses showed how and why factors were influencing choice
- a demonstrated breadth by referencing a variety of factors within their answers
- effective linking of the sub-factor to specific foods or a range of foods that an individual might choose
- realistic and thoughtful food examples
- clear connections between multiple factors and explaining how these work together to shape food choices.

Common issues that impacted performance on Criterion 6:

- some responses simply repeated information from the scenario without elaborating or explaining its impact on the food choices of the family members
- while most students could identify sub-factors for each person, many found it challenging to evaluate these sub-factors, often providing overly brief responses
- not including food examples
- excessive repetition of the same sub-factor, for example, discussing nutritional requirements for three members of the family
- incorrectly matching the explanation to the sub-factor identified
- analysing factors for which there was very little evidence in the scenario, at the expense of more obvious factors

- including dietary modification advice unrelated to this section of the exam, or ‘life advice’, which was not awarded marks
- many students misunderstood the scenario and thought the family had moved from Hobart to rural Tasmania, when it was in fact the other way around. This meant their explanation of sub-factors and food choices was incorrect
- contradictory information and food examples. Many students recognised affordability as an issue for the Parsons, noting they would purchase cheaper products, but later, when describing increased availability in a city area, suggested that living in Hobart might lead them to purchase oysters and crayfish (both highly expensive products)
- persistent assumptions that all quick and cheap food is unhealthy, and that low-income families would regularly purchase takeaway meals such as McDonalds. While this is plausible for some questions, it would be ideal for students to demonstrate awareness of cheap, quick, and nutritious options such as tinned beans and lentils, frozen vegetables and discounted local or seasonal fruit.

Question 15

Students were required to identify, discuss and evaluate a range of factors influencing the family’s food choices, including those unique to individual family members. They needed to consider social, economic, psychological and physiological factors, provide specific food examples and clearly demonstrate how these factors are linked to the choices made by the family.

Marking Guide:

Each factor–subfactor paragraph is marked out of **3 marks**:

- **1 mark — Correct main factor and sub-factor**
- **1.5 marks — Definition + Explanation (Integrated):** Accurate definition using correct terminology and a clear explanation of how this subfactor influences food choice in the Parsons family.
- **0.5 mark — Food Example:** A specific, relevant food example that supports the explanation.

Successful Responses Included:

- **Parsons Family — Psychological – Values**

  Values are the deep personal principles that guide what individuals see as acceptable or desirable to eat. The Parsons family hold traditional values shaped by their rural background, which may lead them to prefer familiar, homecooked meals that emphasise routine and family connection. These values might encourage Michelle and Brad to prepare simple, traditional dishes that align with their identity.

  Food examples: Roast lamb with potatoes and vegetables, shared pancake breakfast with simple lemon and sugar toppings on a weekend morning, popcorn at a family movie night.

- **Parsons Family — Economic – Affordability (Cost)**

  Affordability refers to the influence of income and budget on what foods can be purchased. With limited financial resources and the goal of buying a second-hand car, the Parsons family must prioritise low-cost foods. This restricts their ability to buy convenience meals or speciality items and increases reliance on staples that can stretch across several meals.

  Food examples: Bulk mince used for spaghetti Bolognese, discounted fruits and vegetables, tinned and frozen vegetables, home brand biscuits and pasta, day-old bread rolls.

- **Michelle — Economic – Available Resources (Time and Transport)**

  Available resources include time, transport, skills and equipment that influence food preparation. Michelle's long commute on two buses significantly reduces her time for shopping and cooking. Limited transport also restricts spontaneous shopping, encouraging her to rely on foods that store well and can be prepared quickly.

  Food examples: Frozen vegetables used in quick stir-fries, stir-through pasta sauce.

- **Michelle — Social – Lifestyle and Work/Study Patterns**

  Lifestyle and work/study patterns describe how schedules and commitments shape food availability. Michelle's university workload and travel mean she is often unavailable during the day, requiring dinner solutions that fit around competing schedules. This encourages reliance on meals that can be prepared ahead of time and served flexibly to members of the family.

  Food examples: Slow cooker beef stew, large tray of pasta bake which can be reheated.

- **Brad — Social – Lifestyle and Work Patterns (Night Shift)**

  Work patterns refer to working hours and conditions that influence meal timing and choice. Brad's nightshift role leads to irregular mealtimes and likely fatigue, increasing the likelihood of choosing convenient, quick energy foods during breaks rather than structured meals.

  Food examples: Filled rolls or muesli bars for nightshift breaks, iced coffee to keep him alert.

- **Noah — Physiological – Sensory Reactions – Taste**

  Sensory reactions include preferences based on taste, texture, aroma and appearance. Young children have a higher concentration of tastebuds and are more sensitive to strong flavours. Noah's dislike of strong or spicy foods likely shapes meal planning, as the family must choose milder meals that he will accept or modify them to suit his preferences.

  Food examples: Plain pasta with cheese, mashed potato and plain beef sausages.

- **Beth — Physiological – Nutritional Requirements/Health Status**

  Nutritional requirements vary by health status and influence food timing and macronutrient choices. Beth's Type 1 diabetes requires predictable carbohydrate intake and lower glycaemic foods to support stable blood glucose levels, influencing the family's snack and meal planning.

  Food examples: Wholegrain bread sandwiches, plain Greek yoghurt, baked sweet potato with dinner, porridge for breakfast. During and after netball games, Beth may need to consume higher glycaemic index foods such as an apple juice or a small amount of jellybeans to manage her blood sugar levels.

- **Michael — Physiological – Level of Activity**

  Level of activity affects energy and nutrient requirements. Michael's involvement in soccer and athletics increases his need for complex carbohydrates and protein for performance and recovery, which is likely to shape a preference for higher energy meals and snacks.

  Example: Wholegrain pasta with chicken or bananas before training, boiled eggs and small tins of tuna and wholegrain crackers for snacks, a large serve of rice with grilled chicken and steamed vegetables after athletics competitions.

- **Parsons Family — Social – Culture and Tradition**

  Culture and tradition refer to the food practices and customs shaped by a family's background and lived experiences. Having spent many years on a rural Tasmanian farm, the Parsons family may be accustomed to simple, hearty meals that reflect their farming lifestyle. These traditions could continue to influence their meal choices after moving to Hobart, encouraging dishes that are familiar, comforting and tied to their sense of identity.

  Example: Shepherd's pie or minute steak with roast pumpkin and carrots.

- **Michelle — Psychological – Attitudes and Experiences**

  Attitudes and experiences include past exposure to foods and learned preferences. Michelle's background in teaching and current study in environmental science may shape positive attitudes toward nutritious, minimally processed and sustainable foods. Her experience managing a household while studying could influence a preference for meals that are simple, practical and aligned with her values.

  Example: Vegetable-based soups, mild lentil curry dishes, local and in-season vegetables from a farmers' market.

- **Michael — Social – Peer Group**

  Peer groups influence food choices through shared activities and norms. Michael's involvement in athletics and soccer exposes him to peers who likely prioritise fitness and performance, reinforcing motivation to choose foods that support or are associated with sporting success.

  Example: Wholegrain wraps with chicken and salad before training, brown rice with chicken and broccoli for dinner, sports drinks such as Gatorade during training, protein shakes.

Interrelationships/Links:

- **Economic – Resources (Time) and Economic – Affordability**

  As a single-income family who are also trying to save money for a car, there would be a limited budget for food. At the same time, between sporting commitments, Michelle's travel and study, and the need for Brad to sleep throughout the day, the family has very little time for food preparation and purchase. They would be influenced to purchase foods which are both inexpensive and quick to prepare, giving them flexibility to serve them to different family members at convenient times. For example, Michelle may cook a quick rice noodle and egg stir-fry for dinner, or on the weekends make a large stew with cheaper cuts of beef, bulked out with potato and carrot, that can be frozen and then later taken to work by Brad to eat during nightshift.

  For school lunches, the children might be given apples and discounted muesli bars, along with a simple cheese sandwich, also suiting Noah's taste preferences.