



SAMPLE ASSESSMENT TASKS

FOOD SCIENCE AND TECHNOLOGY
ATAR YEAR 12

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Sample assessment task

Food Science and Technology – ATAR Year 12

Task 1 – Unit 3 and Unit 4

Assessment type: Response

Conditions

Time for the task: 60 minutes

In-class test to be completed under test conditions

Answer all questions

Task weighting

10% of the school mark for this pair of units

Test – Nutrition (54 marks)

Section One: Multiple-choice (10 marks)

1. Foods high in vitamin B9 include
 - (a) tomato juice, chicken liver, soya bean, yoghurt.
 - (b) beef, yoghurt, spinach, yeast extract.
 - (c) soya bean, tomato juice, yeast extract, beef.
 - (d) yeast extract, spinach, soya bean, chicken liver.

2. Potassium functions in the body to
 - (a) maintain fluid balance in body cells and transfer nerve impulses.
 - (b) regulate development of enzymes and increase absorption of calcium.
 - (c) maintain phosphate levels in the blood and reduce cholesterol.
 - (d) transfer glucose to body cells and improve metabolism of carbohydrates.

3. During digestion, protein is broken down into
 - (a) hydrochloric acids.
 - (b) amino acids.
 - (c) tartaric acids.
 - (d) ascorbic acids.

4. Phytochemicals are
 - (a) essential nutrients for maintaining blood glucose levels.
 - (b) compounds produced by animals.
 - (c) regulatory components essential for healthy body fluids.
 - (d) protective components found in foods to help prevent disease.

5. A key function of vitamin B12 is to assist in
 - (a) bone formation.
 - (b) healing an injury and preventing infection.
 - (c) red blood cell formation.
 - (d) muscle development.

6. The health condition coeliac is the inability of the body to
 - (a) absorb nutrients.
 - (b) break down micronutrients.
 - (c) digest fat-soluble vitamins.
 - (d) reduce starch to simple sugars.

7. Saturated fats and oils
 - (a) help reduce blood cholesterol.
 - (b) are important for blood circulation.
 - (c) have been linked to cardiovascular disease.
 - (d) are formed during high temperature cooking.

8. Smoking increases the risk of
 - (a) developing weak coronary arteries around the heart.
 - (b) high blood pressure and fat accumulation in the blood vessels.
 - (c) blood clots forming in blood vessels and weakening blood vessel walls.
 - (d) low oxygen carrying capacity of blood and high blood pressure.

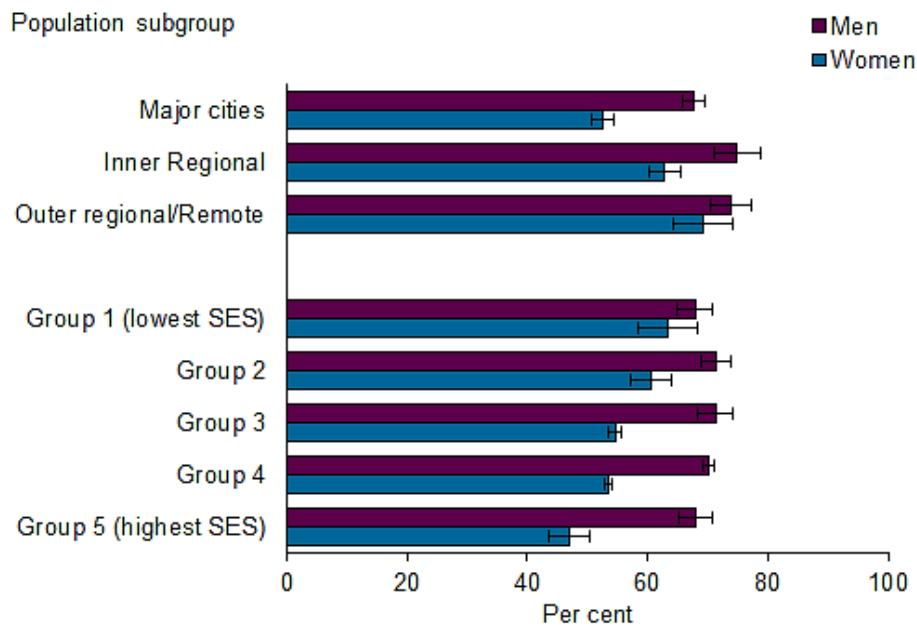
9. Foods with a low glycaemic index
 - (a) have starches with more effect on blood glucose than most sugars.
 - (b) release glucose slowly into the blood.
 - (c) improve insulin sensitivity and blood circulation.
 - (d) release glucose quickly into the blood.

10. Peristalsis is associated with
 - (a) amylase and absorption processes.
 - (b) mechanical breakdown of food.
 - (c) enzymatic breakdown of food.
 - (d) metabolism and chemical processes.

13. Discuss why the consumption of functional foods benefits neural tube development. Provide examples of suitable functional foods to support your answer. (3 marks)

14. The National Health Priority Areas initiative targets specific diseases and health conditions that the Australian government has identified as contributing significantly to illness and injury in the community. Overweight and obesity is one of these priority areas. Consider the following data and answer the questions below.

Overweight or obese, persons aged 18 and over, by selected population characteristics, 2011–12



Note: Socioeconomic status (SES)

- (a) Compare the data for overweight or obese persons aged 18 and over in Major cities with those in Inner regional and Outer regional/Remote areas and record your findings. (2 marks)

- (b) Comment on the relationship between overweight or obese persons aged 18 and over and their socioeconomic status. Note the trend for men and for women across the SES Groups. (2 marks)

- (c) Discuss how geographic location and socioeconomic status could impact on food choices and the prevalence of overweight and obesity levels in Australia. (4 marks)

15. Describe the chemical digestion of carbohydrate. (5 marks)

16. Outline the purpose of the Nutrient Reference Values. (2 marks)

Question 14 Graph from: Australian Institute of Health and Welfare. (2015). *Who is overweight?* (Overweight or obese, persons aged 18 and over, by selected population characteristics, 2011–12). Retrieved May, 2015, from www.aihw.gov.au/who-is-overweight/#inequalities
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Marking key for sample assessment task 1 – Unit 3 and Unit 4

| Question | Answer |
|--------------|-----------------|
| 1 | D |
| 2 | A |
| 3 | B |
| 4 | D |
| 5 | C |
| 6 | A |
| 7 | C |
| 8 | C |
| 9 | B |
| 10 | B |
| Total | 10 marks |

11. Discuss the influence on health and wellbeing of exercise, smoking and illicit drugs.

| Description | Marks |
|---|-----------|
| Provides a concise and comprehensive discussion of influences on health and wellbeing, with explicit links to exercise, smoking and illicit drugs | 5–6 |
| Provides a comprehensive discussion of lifestyle influences on health and wellbeing, with links to exercise, smoking and illicit drugs | 3–4 |
| Provides a brief and incomplete discussion of influences on health and wellbeing, with vague links to exercise, smoking and/or illicit drugs | 1–2 |
| Total | /6 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> maintain a healthy weight range to reduce incidence of diet-related health conditions, including cardio vascular disease, obesity and diabetes makes links to passive and active exercise with appropriate balanced food intake impact of smoking on health, including blood clotting, cancer effect of illicit drugs on lifestyle, such as irregular meals, unbalanced nutrient intake, limited finances, homelessness, poverty | |

12. Explain the term ‘food intolerance’. Draw on **two** diet-related health conditions to support your explanation.

| Description | Marks |
|--|-----------|
| Provides an accurate explanation of food intolerance; clear, explicit links to two diet-related conditions, such as gluten and lactose intolerance; correct details of impact on digestion and diet management provided for each condition | 5 |
| Provides an explanation of food intolerance; clear links to two diet-related conditions; mostly correct details of impact on digestion and diet management provided for each condition | 4 |
| Provides a general explanation of food intolerance; some links to two diet-related conditions; broad details of digestion issue and food intake provided for each condition | 3 |
| Provides limited explanation of food intolerance; vague links to two diet-related conditions; unclear details of impact on digestion and food intake for each condition | 2 |
| Provides a mostly inaccurate description of food intolerance; notes one or two diet-related conditions, with limited links to digestion and food intake | 1 |
| Total | /5 |

| Answer could include, but is not limited to: |
|---|
| <ul style="list-style-type: none"> • food intolerance: individual response to specific chemical build up or combination of chemicals, sensitivity varies between individuals; symptoms differ and could include headaches, stomach and bowel irritation, tiredness, feeling run down • gluten intolerance: Coeliac disease; the protein found in cereals damages lining of the intestine and prevents absorption of nutrients • lactose intolerance: difficulty in digesting lactose, the carbohydrate in milk; produces insufficient enzyme lactase; alternative milk (calcium) sources |

13. Discuss why the consumption of functional foods benefits neural tube development. Provide examples of suitable functional foods to support your answer.

| Description | Marks |
|---|--------------|
| Provides an accurate account of functional foods; links consumption of folate with reducing the incidence of neural tube defects in unborn babies, such as spina bifida; appropriate examples of suitable foods to lower incidence | 3 |
| Provides a general account of functional foods; relates folate to neural tube defects, such as spina bifida; some examples of suitable foods to lower incidence | 2 |
| Provides a brief, limited account of functional foods; mentions folate and spina bifida; gives example of a suitable food to lower incidence | 1 |
| Total | /3 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> • functional food: foods that surpass the basic nutrition usually present in foods that have proven health benefits or reduce the risk of disease; may be naturally occurring or may be added during manufacture • neural development: associated with consumption of folate, vitamin B9; reduce incidence of neural tube defects, such as spina bifida in unborn babies • suitable rich food sources: leafy green vegetables, yeast extracts and chicken liver | |

14. (a) Compare the data for overweight or obese persons aged 18 and over in Major cities with those in Inner regional and Outer regional/Remote areas and record your findings.

| Description | Marks |
|--|--------------|
| Provides an accurate comparison of the data which could include: Inner regional and Outer regional/Remote areas have a higher incidence of men and women being overweight or obese than Major city counterparts. Women have lower levels than men in all three regions. Between 47% and 62% women in Major cities are overweight or obese, which is slightly lower compared to 50% to 65% women in Regional and Remote areas. Approximately 75% men in Inner regional and Outer regional/Remote areas are overweight or obese. | 2 |
| Provides a mostly accurate comparison of the data | 1 |
| Total | /2 |

- (b) Comment on the relationship between overweight or obese persons aged 18 and over and their socioeconomic status. Note the trend for men and for women across the SES Groups.

| Description | Marks |
|---|-----------|
| Provides an accurate comment of the data which could include: In relation to their SES group, the weight of women increases as their SES gets lower. Almost two thirds of the women in Group 1, the lowest SES group, are overweight or obese compared to almost half the women in Group 5, the highest SES group. In relation to their SES group, the weight of men is relatively constant for each of the five SES groups; therefore, SES is not generally an indicator for being overweight or obese. Approximately 70–75% of all men are either overweight or obese. The trend is for men to be more overweight or obese than women irrespective of socioeconomic status or where they live. | 2 |
| Provides a mostly accurate comment of the data | 1 |
| Total | /2 |

- (c) Discuss how geographic location and socioeconomic status could impact on food choices and the prevalence of overweight and obesity levels in Australia.

| Description | Marks |
|--|-----------|
| Provides a comprehensive and detailed discussion with clear links to city, regional/remote locations and socioeconomic status on being overweight or obese; direct association of geographic location with food choices, lifestyle factors | 4 |
| Provides a detailed discussion with links to city, regional/remote locations and socioeconomic status on being overweight or obese; draws on geographic location, food choices, lifestyle factors | 3 |
| Provides a general discussion with some connection to city, regional/remote locations and socioeconomic status on being overweight or obese; mentions geographic location, food choices, lifestyle factors | 2 |
| Provides a brief outline with limited connection to city, regional/remote locations and/or socioeconomic status on being overweight or obese; notes a food choice or lifestyle factor | 1 |
| Total | /4 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> the level of overweight and obese adults varies according to geographical location and is highest in Inner regional and Outer regional/remote areas; men are more likely to be overweight or obese than women regardless of SES or regional/remote or city location; approximately three quarters of men in inner regional and outer regional/remote are overweight or obese limited food choices in remote areas due to: high cost of transport, limited fresh produce, highly processed foods in some areas; other areas, such as mine sites providing regular, high quality food exercise and nutritional status: low physical activity level due to hot weather conditions and mechanised operations at mine sites contribute to overweight and obesity; work long hours, limited opportunity to exercise; generally more men work on mine sites than women limited nutrition knowledge contributes to poor food choices limited food preparation skills, less inclination to cook food limited employment opportunities; hence, limited financial resources to purchase fresh, quality food lowest overweight and obese women in the highest SES group, at nearly 50%; availability and ability to purchase fresh, quality food increasing trend of health conditions related to being overweight or obese contributing to higher healthcare costs | |

15. Describe the chemical digestion of carbohydrate.

| Description | Marks |
|---|-----------|
| Provides an accurate description of the chemical digestion of carbohydrate; uses correct, relevant terminology for the process | 4–5 |
| Provides a description of the chemical digestion of carbohydrate; uses correct terminology | 3–2 |
| Provides step-by-step outline of the digestion of carbohydrate; uses limited terminology | 1 |
| Total | /5 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> • mouth: salivary glands release the enzyme salivary amylase to begin the breakdown of carbohydrate (polysaccharide) • stomach: mixture in the stomach known as chyme, no further digestion • pancreas and small intestine: chyme enters the duodenum (small intestine); pancreas releases the enzyme pancreatic amylase which breaks polysaccharide into a disaccharide maltose; once the chyme passes into the jejunum, it comes in contact with enzymes maltase, lactase and sucrase to break down the disaccharides into monosaccharides • large intestine (colon): plant fibre is not digested like other carbohydrates; excreted or partly digested by intestinal bacteria | |

16. Outline the purpose of the Nutrient Reference Values.

| Description | Marks |
|--|-----------|
| Provides an accurate description of Nutrient Reference Values; with example | 2 |
| Provides a general description of Nutrient Reference Values | 1 |
| Total | /2 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> • purpose: outlines the levels of intake for essential nutrients to meet known nutritional needs for healthy individuals; includes additional information for some nutrients that may reduce risk of disease (for each nutrient, values for Estimated Average Requirement, Recommended Dietary Intake, Adequate Intake, Estimated Energy Requirement, Upper Level of Intake) | |

17. Provide the following information to the management committee for consideration:

- advice on the nutritional needs of 2–5 year old children, with reference to the *Australian Dietary Guidelines*
- a detailed sample menu for a day, including snacks and drinks
- justification for the reasons for the menu choices you have recommended.

| Description | Marks |
|--|--------------|
| Nutritional needs of the children | |
| Provides detailed and comprehensive advice on the nutritional needs of overweight and obese children in day care; specific and accurate reference to relevant guidelines | 5 |
| Provides detailed advice on the nutritional needs of overweight and obese children in day care; accurate reference to relevant guidelines | 4 |
| Provides advice on the nutritional needs of overweight and obese children in day care; reference to relevant guidelines | 3 |
| Provides limited advice on the food needs for children in day care; reference to some guidelines; mentions an overweight and/or obesity issue | 2 |
| Provides little to no advice on the food needs of children; little reference to guidelines; notes an overweight or obesity issue | 1 |
| Description | Marks |

| Sample menu | |
|---|------------|
| Provides a detailed, comprehensive and well-balanced sample menu for a day; suitable for use in a childcare setting; includes appropriate snacks and beverages; no discretionary foods; age appropriate | 5 |
| Provides a detailed and well-balanced sample menu for a day; for use in a childcare setting; includes mostly suitable snacks and beverages; age appropriate | 4 |
| Provides a well-balanced sample menu for a day; for use in a childcare setting; some snacks and a beverage; generally age appropriate | 3 |
| Provides a sample menu; could be used in a childcare setting; includes some unsuitable, discretionary foods; partly age appropriate | 2 |
| Provides an incomplete menu; limited suitability for a childcare setting; may not be age appropriate | 1 |
| Justify menu selections | |
| Provides valid and detailed justification for each of the menu selections; direct and accurate connection to the appropriate <i>Australian Dietary Guideline</i> | 5 |
| Provides valid justification for each of the menu selections; accurate connection to the <i>Australian Dietary Guidelines</i> | 4 |
| Provides general justification for most of the menu selections; makes connection to the <i>Australian Dietary Guidelines</i> | 3 |
| Provides some justification for most of the menu selections; makes vague connection to one, or two, <i>Australian Dietary Guidelines</i> | 2 |
| Provides limited justification for most of the menu selections; demonstrates little understanding for the application of the <i>Australian Dietary Guidelines</i> | 1 |
| Total | /15 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> • nutritional needs of the children: identifies that the nutritional needs for children are a smaller quantity than required for adolescence and adults; refer to relevant <i>Australian Dietary Guidelines</i> (Guidelines 1, 2, 3); also water, establishment of good food habits, daily exercise and role of discretionary foods • sample menu: well-balanced and suitable for children aged 2–5 years; includes, breakfast, lunch and dinner meals; suitable snack foods for morning and afternoon; water and/or milk beverage; no discretionary foods; can be prepared in a childcare setting • justification: as recommended by the <i>Australian Dietary Guidelines</i>; appealing to children and considers sensory and physical properties, such as finger food, colour, texture | |
| Final total | /54 |

Sample assessment task

Food Science and Technology – ATAR Year 12

Task 5 – Unit 3 and Unit 4

Assessment type: Investigation

Conditions

Period allowed for completion of the task: one week

One week of class time and homework

The validation questions will be completed in class at the end of the investigation. The suggested working time is 45 minutes.

Task weighting

10% of the school mark for this pair of units

Food promotion

(60 marks)

Investigate:

- marketing mix strategies and the influence on consumers
- consumer concerns related to food promotion
- implications of the *Australian Association of National Advertisers (AANA) Code for Advertising and Marketing Communications to Children*, on advertising and marketing food and beverage products in Australia.

Prepare notes on the following investigation.

(20 marks)

1. When a new food product is developed, a variety of advertising and marketing tools, plans and strategies are used to bring the product to the market. The 'marketing mix', often called the 4Ps, incorporates four main elements of marketing: product, price, place and promotion.
 - Provide detailed notes on how product, price, place and promotion are used to promote food products. Support your notes with food-related examples. (2 marks)
 - Select a food advertisement and analyse the intended influence the marketing mix strategy will have on consumers. (2 marks)
2. Consumers have expressed concerns related to the marketing mix strategies used to promote food products.
 - Food advertising directed at children:
 - review and describe the marketing mix strategies directed at children (2 marks)
 - describe consumer concerns related to advertising which is directed at children. (2 marks)
 - Product placement strategies in supermarkets:
 - outline product placement strategies used in supermarkets (2 marks)
 - review and describe product placement strategies for essential and non-essential food products at your local supermarket (2 marks)
 - describe the product placement strategies and target market for **two** supermarket items (2 marks)
 - detail consumer concerns related to food promotion and product placement. (2 marks)
3. The Australian Association of National Advertisers (AANA) is the peak national body for advertisers and marketers in Australia. It aims to promote and safeguard the rights of members

to communicate freely with customers and ensure advertising and marketing communications are conducted responsibly.

- Review the *Code for Advertising and Marketing Communications to Children* (Children’s Code), then:
 - describe the purpose of the Children’s Code, including the self-regulatory system (2 marks)
 - describe the expectation for at least **two** codes of practice. (2 marks)

The notes prepared and developed through your investigation of how marketing mix strategies are used to promote food, particularly to children, consumer concerns related to food promotion and the *Australian Association of National Advertisers (AANA) Code for Advertising and Marketing Communications to Children*, are to be submitted prior to the in-class validation process.

The validation process will be completed in class under test conditions.

Validation (Short answer and essay) (40 marks)

The notes prepared and developed through your investigation of how marketing mix strategies are used to promote food, particularly to children, consumer concerns related to food promotion and the *Australian Association of National Advertisers (AANA) Code for Advertising and Marketing Communications to Children*, are to be submitted prior to the in-class validation process.

The validation process will be completed in class under test conditions. The suggested working time is 45 minutes.

1. (a) Define ‘marketing mix’ and briefly describe the **four** elements of the marketing mix. Provide **one** example for each element, relating it to a food product. (5 marks)

A new line of high protein, low carbohydrate powders and shakes aimed at health-conscious young men and women (aged 18–30) who regularly participate in active sports and work out at the gym has been launched.

- (b) With consideration for each of the **four** marketing mix elements, develop a marketing strategy for the new line of powders and shakes. (4 marks)

- (c) Discuss the impact of banning soft drinks and other sugary beverages, such as flavoured milk, in schools, hospitals, government workplaces and vending machines on the marketing mix strategies previously prepared by an advertising agency. Discuss changes the advertising agency will need to make to its strategies. (4 marks)

- 2. (a) Discuss product placement strategies used in supermarkets. Support your answer with examples to justify the strategies used. (3 marks)

- (b) Supermarkets often locate milk, cheese, eggs and meat at the rear of the store. Discuss reasons for their location and why supermarkets may change the location of these products from time to time. (3 marks)

- 3. (a) Outline the background to the Australian Association of National Advertisers' self-regulatory system. (1 mark)

- (b) Describe the purpose of the *AANA Code for Advertising and Marketing Communications to Children*. (2 marks)

- (c) Discuss **two** codes of practice outlined in the *AANA Code for Advertising and Marketing Communications to Children*. (4 marks)

Marking key for sample assessment task 5 – Unit 3 and Unit 4

Investigation (Research notes)

| Description | Marks |
|--|------------|
| 1. Notes on the marketing mix | /4 |
| Describe the 4Ps | |
| Notes accurately detail characteristics and examples for each of product, price, place and promotion | 2 |
| Notes detail characteristic or example for each of product, price, place and promotion | 1 |
| Analysis of a food advertisement | |
| Notes accurately analyse the marketing mix strategies applied to a food advertisement | 2 |
| Notes describe a marketing mix strategy | 1 |
| 2. Notes on marketing mix strategies to promote food products | /12 |
| Marketing mix strategies directed at children | |
| Notes accurately describe marketing mix strategies directed at children | 2 |
| Notes describe a marketing mix strategy directed at children | 1 |
| Consumer concerns for advertising directed at children | |
| Notes accurately describe consumer concerns for advertising directed at children | 2 |
| Notes describe a consumer concern for advertising directed at children | 1 |
| Product placement strategies in supermarkets | |
| Notes accurately outline product placement strategies in supermarkets | 2 |
| Notes outline a product placement strategy in supermarkets | 1 |
| Product placement strategies for essential and non-essential food products | |
| Notes accurately describe product placement strategies for essential and non-essential food products | 2 |
| Notes describe a product placement strategy for an essential and non-essential food product | 1 |
| Product placement strategies for two food products | |
| Notes accurately describe product placement strategies for two food products | 2 |
| Notes describe placement of two food products | 1 |
| Consumer concerns for product placement in supermarkets | |
| Notes accurately detail consumer concerns for product placement in supermarkets | 2 |
| Notes detail a consumer concern for product placement | 1 |
| 3. The AANA Code for Advertising and Marketing Communications to Children | /4 |
| Purpose of Code and the self-regulatory system | |
| Notes accurately describe the purpose and self-regulatory system of the AANA Code | 2 |
| Notes describe the purpose of the AANA Code | 1 |
| Code of practice | |
| Notes accurately describe the expectation for two codes of practice | 2 |
| Notes describe one code of practice | 1 |
| Total | /20 |

Validation (Short answer and essay)

1. (a) Define 'marketing mix' and briefly describe the **four** elements of the marketing mix. Provide **one** example for each element, relating it to a food product.

| Description | Marks |
|---|-----------|
| Provides an accurate definition for marketing mix, such as marketing focus is on the customer, the four elements of marketing, the process of developing a marketing strategy | 1 |
| For each of the four elements: | |
| Provides an accurate description of the role of the element in the marketing mix; with a relevant supporting example | 1 |
| Total | /5 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> product: the food item available in the marketplace, characterised by size, colour, content; may have nutritional benefits, such as low salt, high fibre, fortified; example – breakfast cereal price: what the consumer must pay in monetary terms or physical cost in obtaining the product; fixed costs for the product, such as land, machinery, capital; variable costs, such as raw materials, processing, labour, packaging; price charged by competitors; profit margin, that is, difference between the costs and price the consumer is willing to pay; example – milk place: where the target market lives, shops, works, plays; the distribution process, corporate chain, cooperatives, farmers market, online environment; the type of distribution outlets where the product will be sold; example – home-made or home grown produce, such as vegetables sold at a farmer's market promotion: informs consumers about new products; persuades customers to buy more of an existing product, such as buy two loaves of bread, the third loaf is free or half price; advertising and marketing strategies, including trial or free samples, recipe ideas, bundling products to make a meal | |

- (b) With consideration for each of the **four** marketing mix elements, develop a marketing strategy for the new line of powders and shakes.

| Description | Marks |
|--|-----------|
| For each of the four marketing mix elements: | |
| Provides an accurate description relevant to the element; linked and appropriate to the sale of high protein, low carbohydrate powders and shakes to health-conscious men and women | 1 |
| Total | /4 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> product: bulk-sized packaging through to individual serve sachets includes: measuring scoop, nutrition information and recommended daily intake, preparation instructions, storage recommendations, ingredient list; considers: flavour range, colour of packaging, image and branding associated with healthy lifestyle price: determine the fixed costs and variable costs; how much health-conscious men and women (aged 18–30) are willing to pay; initial lower profitability or a loss to capture market place: target sales at gyms, active sport centres, magazines, blogs, online, health stores promotion: bulk purchase includes free individual single serves, cup with lid to shake; provides daily meal plan incorporating product to meet recommended daily intake of nutrients; uses natural ingredients, no artificial flavours or colours; images of healthy men and women; on-site tastings and give-aways | |

- (c) Discuss the impact of banning soft drinks and other sugary beverages, such as flavoured milk, in schools, hospitals, government workplaces and vending machines on the marketing mix strategies previously prepared by an advertising agency. Discuss changes the advertising agency will need to make to its strategies.

| Description | Marks |
|---|-----------|
| For each of the four marketing mix strategies | |
| Provides plausible ideas and an accurate description of changes to the marketing mix elements to reflect changing market conditions | 1 |
| Total | /4 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> product: development of a range of drinks with lower sugar content or alternative sweeteners, include natural fruit flavours, a fruit drink range, re-size packaging, new packaging colours and images price: period where price is cheaper than other beverage competitors; allocate expenditure for new advertising campaign, distribution and transport place: survey for possible alternative locations; use mobile vans/trucks for local events, expos, sporting venues, farmers markets; relocate to high-profile positioning in supermarkets promotion: marketing campaign to launch re-branded product, new lines to new segment of the market, convince customers the new product will meet their needs when thirsty, at parties and socialising with friends; free samples and tastings; neither encourage nor promote an inactive lifestyle or unhealthy eating or drinking habit to children (Children's Code) | |

2. (a) Discuss product placement strategies used in supermarkets. Support your answer with examples to justify the strategies used.

| Description | Marks |
|---|-----------|
| Provides a valid description of strategic planning for product placement in supermarkets; convincingly justifies strategies with supporting examples | 3 |
| Provides a description of some strategic planning for product placement in supermarkets; generally justifies each strategy with example | 2 |
| Provides a brief, limited description of product placement in supermarkets; vaguely justifies overall plan with or without simplistic example | 1 |
| Total | /3 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> supermarkets constantly review purchasing trends and alter product placements according to marketing strategy placement of fresh fruit, vegetables and flowers at entrance – customers feel they are walking into a fresh food market with vibrant colours front of store bakery and roasting chickens for a freshly baked smell – appeal to sense of smell and promote a feeling of being hungry, save cooking at home locate snack-size chocolates and chilled soft drinks at the checkout – entice unplanned purchases location at eye level with more expensive options, higher profit products – increase sales and profits high number of 'facings', that is, how many items of a product are visible on the shelf; greater the number, higher the sales – increase sales and profits mid-aisle location is preferable – gives customer time to adjust and familiarise with products in the aisle | |

- (b) Supermarkets often locate milk, cheese, eggs and meat at the rear of the store. Discuss reasons for their location and why supermarkets may change the location of these products from time to time.

| Description | Marks |
|---|-----------|
| Provides a plausible and extensive explanation for the location of specific food products at the rear of the store; clear reasons for strategic redirection of customer traffic through store to improve sales and profit | 3 |
| Provides an explanation for the location of food products at the rear of the store; some generalised reasons for re-location of products related to sale promotions | 2 |
| Provides a limited explanation for the location of food products at the rear of the store; with a simplistic reason for re-location | 1 |
| Total | /3 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> as a result of research and customer purchasing patterns, supermarkets identify consistently popular purchases milk, cheese, eggs and meat are regarded as essential food products for most customers most families consume fresh milk; supermarkets prepared to limit profit on this product to draw customers through to the rear of the supermarket often 'on special', or products such as milk priced with a low profit margin to force customer through supermarkets, increasing possibility of impulse buys, enticed by strategic marketing essential food product locations may change from time to time; moves traffic to specific areas of the supermarket – closer to related products, to be competitive with similar products, direct to location of new products example: new line of products for allergies and intolerances, and trend for healthier food options, location of these products has moved from front of store to closer to rear of supermarket as popularity has increased | |

3. (a) Outline the background to the Australian Association of National Advertisers (AANA) self-regulatory system.

| Description | Marks |
|---|-----------|
| Provides an accurate outline to the background for the AANA self-regulatory system | 1 |
| Total | /1 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> AANA provide an overarching set of principles with which all advertising and marketing, and communication across all sources of media, should comply four specialised codes to address specific circumstances – <i>Code of Ethics; Code for Marketing and Advertising Communications to Children; Food and Beverages Advertising and Marketing Communications Code; Environmental Claims in Advertising and Marketing Code</i> | |

- (b) Describe the purpose of the AANA Code for *Advertising and Marketing Communications to Children*.

| Description | Marks |
|---|-----------|
| Provides an accurate description of the purpose of the AANA Children's Code | 2 |
| Provides a limited description of the purpose of the AANA Children's Code | 1 |
| Total | /2 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> provide guidelines, code of practice to ensure advertisers and marketers develop and maintain a high sense of social responsibility in advertising and marketing to children guidance to consumers regarding what are appropriate and acceptable practices by the advertising, marketing and media industry when advertising to children | |

- (c) Discuss **two** codes of practice outlined in the AANA Code for *Advertising and Marketing Communications to Children*.

| Description | Marks |
|--|-----------|
| For each of two codes of practice: | |
| Provides an accurate description of the code with direct relevance to children | 2 |
| Provides a limited description of the code | 1 |
| Total | /4 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> code of practice includes: prevailing community standards, factual presentation, placement, sexualisation, safety, social values, parental authority, qualifying statements, competitions; popular personalities, premiums; privacy, food and beverages, AANA Code of Ethics | |

4. Explain the possible implications of the AANA Code for *Advertising and Marketing Communications to Children* for this sector of the food industry.

| Description | Marks |
|---|-----------|
| Provides a detailed, comprehensive explanation of implications for specific sector of the food industry; relates to, and addresses consumer concerns for obesity; compliance with the ethical constraints of the Children's Code | 4 |
| Provides a detailed explanation of implications for the specific sector of the food industry; general consumer concerns for obesity; observes ethical constraints of the Children's Code | 3 |
| Provides an explanation of issue for the food industry; some obesity concerns; identifies Children's Code requirements | 2 |
| Provides a brief, limited statement of marketing food to children; may mention obesity and the Children's Code | 1 |
| Total | /4 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> survey community trends and concerns of consumer groups, such as family, health agencies identify consumer concerns, such as both parents in full/part-time employment, time constraints, healthy options at fast-serve casual restaurants; impact of advertising, such as product with free or half-priced sugary drink, use of competitions, popular personalities; establishment of healthy eating patterns for children use the 4Ps marketing mix to address consumer concerns or could forfeit market share (and profits), such as reviewing product – alter menu choices, promote ownership/partnership of obesity issue, provide real solutions review and ensure marketing mix complies with code of practice referred to in the Children's Code, which identifies children as persons 14 years old or younger | |

5. Discuss the statement 'eye level is buy level' with reference to both product placement in supermarkets and consumer food promotion concerns.

| Description | Marks |
|---|------------|
| Background | |
| Provides a concise, introductory explanation of product placement strategies used by supermarkets | 2 |
| Provides a brief, limited explanation of product placement used by supermarkets | 1 |
| Product placement | |
| Provides a detailed, comprehensive explanation of product placement in supermarkets; focus on specific tactics for eye-level positioning | 4 |
| Provides a detailed explanation of product placement in supermarkets; focus on tactics for eye-level positioning | 3 |
| Provides a generalised description of product placement in supermarkets; some tactics for eye-level positioning | 2 |
| Provides a brief, limited description of product placement in supermarkets; weak link to eye-level positioning | 1 |
| Consumer concerns related to food promotion | |
| Provides a detailed, comprehensive explanation of consumer concerns; direct relationship to food promotion and marketing strategies used by supermarkets | 4 |
| Provides a detailed explanation of consumer concerns; some relationship to food promotion and marketing strategies used by supermarkets | 3 |
| Provides a generalised description of consumer concerns; some links to food promotion and marketing strategies in supermarkets | 2 |
| Provides a brief, limited description of consumer concerns; weak links to food promotion or a marketing strategy | 1 |
| Total | /10 |
| Answer could include, but is not limited to: | |
| <ul style="list-style-type: none"> background: analysis of past and current sales patterns, supermarkets develop a diagrammatic plan that shows how and where specific retail products should be placed on retail shelves or displays in order to increase customer purchases eye level is buy level: profit motive; product/brand competition for eye-level positioning; consumers attracted to products at eye level, often heavily promoted or 'on sale'; regularly feature non-carbonated drinks, cereal bars, soft drinks, biscuits, crackers i.e. highly processed and generally poor nutrition choices; with wide shelf 'facings' for higher profit margins; eye-catching promotions with large, coloured tags at eye level; coordinated marketing campaigns, such as linked to television or social media advertising, loyalty programs and endorsements; confusing nutrition messages, such as low fat, low cholesterol, natural; cheaper whole foods may cost less and located on high or low shelf, out of sight range consumer concerns: down-sizing package but price remains same or higher; in-store promotional techniques, including in-store merchandising, celebrity endorsements, competitions, advertising campaigns; impact of advertising contributing to cost of food, particularly for consumers with limited budgets, lack of nutrition knowledge, shopping skills; spend more than anticipated; location of products at a child's eye level; high-profit products, such as soft drinks and chocolates, at the checkout; movement through supermarket to purchase essentials | |
| Total – Investigation | /20 |
| Total – Validation | /40 |
| Final total | /60 |

Sample assessment task

Food Science and Technology – ATAR Year 12

Task 7 – Unit 4

Assessment type: Production analysis

Conditions

Period allowed for completion of the task: three weeks

The production analysis will be conducted in class under test conditions. The suggested working time for the report is 45 minutes.

Task weighting

10% of the school mark for this pair of units

New product proposal

(40 marks)

Background scenario for the task

As the food technology consultant for Kramara, a large international food company, your role is to review and update menu choices for the company's chain of fast-serve casual restaurants. This line of food is most popular with the adolescent demographic group. You have received a summary of the survey 'Food trends: what are they eating now?' conducted by an outside advertising agency.

The survey identified three major keys to success for today's fast-serve casual restaurants:

- philanthropy – essentially, giving back to the community appeals highly to consumers. The survey cited Rosa's Fresh Pizza, Philadelphia, USA, where customers, for an extra dollar, buy a slice of pizza to help feed the homeless. This system has created worldwide publicity for a small pizza shop at minimal cost.
- local ingredients – essential to name the food sources for customers to draw connections and support local growers and producers.
- premium products – consumers are willing to pay more for antibiotic-free, genetically modified organism-free and hormone-free attributes.

The survey noted three 'hot trends' in the current market:

- innovation within the context of something familiar; for example, hamburger with lettuce, beetroot, tomato (familiar) and gourmet lamb burger with feta, spinach, olive (innovative)
- 51% of consumers now prefer spicy foods/flavours to non-spicy options
- perception of reducing the quality of the food when content is removed; for example, the report recommends that manufacturers not advertise removing sodium from soups.

Kramara is considering entering new markets as the survey identified potential growth in:

- farmers markets: produce sales have increased over 60% in the past five years, 'pop-up' food stalls are relatively inexpensive to set up and popular with consumers
- mobile food vendors: provide a delivery service, such as a food truck attending businesses, expos, sporting events, cultural events
- micro mart: lease small area of floor space in a large department store, airport, for example, preferably in a high-traffic area; profits can be nearly double that of vending machines; consumers can hold and examine a product and read the nutritional information before purchase, using a self-check-out system.

Kramara is sensitive and responsive to changing consumer needs and plans to develop a product proposal for a new food product to maintain market share.

It is your role as the food technologist at Kramara to devise and present to the management group a product proposal for a new food product, either for the company's chain of fast-serve casual restaurants or for a new market. Kramara will assess your proposal and select components of the survey results in the development of the new product.

The technology process (Notes)

(20 marks)

Before production, prepare notes and then develop a product proposal and produce a new food product that responds to a consumer need.

- Investigate results of the survey conducted for Kramara and consider:
 - keys to success in the food market
 - 'hot trends' in the current market
 - new markets with potential growth (5 marks)
- Devise a product proposal for a new food product based on the results of the survey conducted for Kramara:
 - develop a consumer profile
 - outline the product purpose
 - determine the product specifications (4 marks)
- Devise/adapt recipe:
 - select preferred commodities
 - select processing techniques
 - conduct a quantitative survey
 - conduct qualitative, sensory evaluation
 - determine presentation or packaging (6 marks)

During production

- produce and package the proposed product (2 marks)

After production

- evaluate the product on the day of preparation and record the sensory properties and any issues with the recipe adaptation. (3 marks)

The technology process notes developed for the new proposed product for Kramara may be used during the product analysis. Notes on the technology process are to be submitted at the conclusion of the production analysis.

Production analysis report**(20 marks)**

The technology process notes developed for the new proposed product for Kramara may be used during the writing of the product analysis report. Notes on the technology process are to be submitted at the conclusion of the production analysis report.

Prepare a report of your new product proposal for Kramara. The suggested working time for the report is 45 minutes.

The report will:

- include an introductory statement related to the product proposal, with understanding of market focus, consumer profile and recipe adaptation
- provide evidence using the following headings:
 - features of the product and its suitability to the consumer group – select from the background information to develop consumer profile, current food trends and specific market conditions (4 marks)
 - quantitative survey – review results and incorporate consumer preferences into proposal (4 marks)
 - qualitative sensory evaluation – review results and incorporate consumer sensory preferences into proposal (4 marks)
 - draw conclusions – consider various points of view, combination of products, consumer preferences and potential market growth (4 marks)
 - make recommendations – justify development of proposed product based on survey results, relative to consumer choice and preferences, and potential market. Provide your recommendation to the management group on whether Kramara should continue with the fast-serve casual restaurant line or enter into a new market for potential company growth with the new product. (4 marks)

Marking key for sample assessment task 7 – Unit 4

The technology process (Notes)

| Description | Marks |
|--|------------|
| Investigate | |
| Notes accurately relate to detailed investigation of survey results and market conditions for company growth | 5 |
| Notes accurately relate to detailed investigation of survey results and market conditions | 4 |
| Notes accurately relate to investigation of survey results and market conditions | 3 |
| Notes relate to some details of investigation into some survey results and market conditions | 2 |
| Notes relate briefly to survey results and market conditions | 1 |
| Devise a product proposal | |
| Notes accurately relate to detailed development of the product proposal requirements | 4 |
| Notes accurately relate to development of the product proposal requirements | 3 |
| Notes relate to some details of development of some product proposal requirements | 2 |
| Notes relate briefly to product proposal requirements | 1 |
| Devise a recipe adaptation | |
| Notes accurately detail appropriate recipe adaptations, commodities, processing techniques, packaging; include quantitative and qualitative survey results | 6 |
| Notes detail appropriate recipe adaptations, commodities, processing techniques, packaging; include some quantitative and qualitative survey results | 5 |
| Notes detail recipe adaptations, commodities, processing techniques, packaging; some reference to quantitative and qualitative survey results | 4 |
| Notes outline general recipe adaptations, commodities, processing techniques; limited reference to quantitative and/or qualitative survey results | 3 |
| Notes outline some adaptations, processing techniques and packaging; little or no reference to quantitative and/or qualitative survey results | 2 |
| Notes relate briefly to adaptations and/or development of process and/or packaging | 1 |
| Produce | |
| Notes accurately detail production and packaging techniques | 2 |
| Notes detail a production technique or packaging technique | 1 |
| Evaluate | |
| Notes accurately relate to detailed evaluation of product and recipe adaptation; include sensory properties | 3 |
| Notes accurately relate to evaluation of product and sensory properties | 2 |
| Notes relate to some aspects of evaluation | 1 |
| Total | /20 |

Production analysis report

| Description | Marks |
|--|------------|
| Features of the product and its suitability to the consumer group | |
| Provides a detailed, logical account for selection of specific features for the new product; clearly validates suitability to needs of consumer group, such as philanthropy, local ingredients, premium products, food preferences, current trends and where consumers prefer to shop for food | 4 |
| Provides a detailed account for selection of features for the new product; validates suitability to most needs of consumer group | 3 |
| Provides a general account of features for the new product; generally validates suitability to some needs of consumer group | 2 |
| Provides an outline of features for the new product; notes limited needs of consumer group | 1 |
| Quantitative survey | |
| Provides a detailed, comprehensive summary of survey results; evidence of accurate collation and sorting of responses; makes valid and accurate conclusions on consumer preferences | 4 |
| Provides a detailed summary of survey results; evidence of collation and sorting of responses; makes valid conclusions on consumer preferences | 3 |
| Provides a general summary of survey results; evidence of collating responses; makes some valid conclusions on consumer preferences | 2 |
| Provides limited survey results; collects few responses; makes a brief statement on consumer preferences | 1 |
| Qualitative sensory evaluation | |
| Provides a detailed, comprehensive summary of sensory evaluation data; evidence of accurate collation and sorting of responses; makes valid and accurate conclusions on consumer food preferences | 4 |
| Provides a detailed summary of sensory evaluation data; evidence of collation and sorting of responses; makes valid conclusions on consumer food preferences | 3 |
| Provides a general summary of sensory evaluation data; evidence of collating responses; makes some valid conclusions on consumer food preferences | 2 |
| Provides limited sensory evaluation data; collects few responses; makes a brief statement on consumer preferences | 1 |
| Draw conclusions | |
| Provides a valid and convincing concluding statement; gathers and considers evidence from various points of view, draws on a combination of products, consumer preference, potential market growth | 4 |
| Provides a valid concluding statement; considers evidence from various points of views, considers a combination of products, consumer preference, potential market growth | 3 |
| Provides a general concluding statement; evidence from one or two points of view, mentions products, consumer preference and markets | 2 |
| Provides a brief, limited concluding statement; may include a point of view, states a product, consumer need and/or markets | 1 |
| Make recommendations | |
| Recommends and presents a detailed and comprehensively planned new product proposal; convincingly justifies selection of product based on keys to success, current market trends, potential growth markets | 4 |
| Recommends and presents a detailed new product proposal; justifies selection of product based on keys to success, current market trends, potential growth markets | 3 |
| Presents a new product proposal; selection based on one or two keys to success, a current market trend, potential market | 2 |
| Presents a limited new product proposal; selection based on either a key to success, market trend and/or potential market | 1 |
| Total | /20 |
| Final total | /40 |