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1999 HSC

Food Technology

Notes from the Examination Centre

Acknowledgements

2/3 Unit, Q14, *Year Book Australia*, ABS, 1998

3 Unit, Q3, Brooker et al, *Senior Food Technology: Preliminary Course*, McGraw Hill, Sydney 1996, p 136

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1999 Higher School Certificate Food Technology Notes from the Examination Centre

Overview

In 1999, 3544 candidates attempted 2/3 Unit (Common) paper and 391 presented for the 3 Unit Additional paper.

Section 1 of the 2/3 Unit paper contained 12 multiple choice items, the results of which are tabulated on the following page.

In Sections II and III of the 2/3 Unit and in the 3 Unit Individual Research Projects responses have been ranked relative to the quality of other responses / submissions.

2/3 Unit (Common)

Written Examination

Section I - Multiple Choice (12 marks)

Questions 1 - 12

The following table is an item analysis of questions 1 - 12. It shows the correct response and the percentage of the candidature who chose each correct response.

Question	Correct response	Percentage of candidature
1	D	61.20
2	B	61.29
3	C	79.67
4	D	60.58
5	C	78.62
6	A	63.69
7	D	78.33
8	A	77.76
9	B	87.72
10	A	85.95
11	B	82.73
12	B	94.38

Section II - Short Response Answers (48 marks)

Question 13 - Food Manufacture (Compulsory)

Select ONE of the following food products:

- milk
- meat
- fruit
- bread

- (a) Outline the possible causes of spoilage for this food product.
- (b) Describe a suitable process of preservation that would prevent spoilage.
- (c) Analyse the reasons for the success of this preservation process for your particular food.
- (d) Devise and discuss an experiment that demonstrates the effect of spoilage on this food product.

Above Average responses

Candidates showed a thorough understanding of the question in all four sections, and, using accurate terminology, outlined two or more relevant causes of food spoilage. The scripts described in detail one or two preservation processes applicable to the food chosen. Extensive knowledge of the reasons for the success of the preservation process was also apparent. These candidates clearly set out the experimental procedure for a variety of food samples, explained experiments, drew comparisons and clearly described results, conclusions and appropriate outcomes.

Average responses

Scripts in this range were limited to knowledge of environmental factors involved in food spoilage. Here candidates had a general understanding of the major preservation process for the food chosen but their descriptions lacked accuracy. They provided advantages of preservation or used simple language in their attempts to analyse the reasons for the success of the preservation process. These candidates provided a basic comparison of food and suggested daily observations of results.

Below Average responses

Scripts in this category provided a list of the causes of spoilage. Here candidates were able to list a major method of preservation suitable to the food chosen but failed to give specific details of the process involved. These candidates did not provide any analysis and showed a limited knowledge of any advantages of preservation. Poor samples of experimentation were chosen, lacking in comparison and / or discussion of results.

Question 14 - The Australian Food Industry (Compulsory)***APPARENT PER CAPITA CONSUMPTION OF FOODSTUFFS IN AUSTRALIA***

YEAR	COMMODITY						
	<i>Beef and veal</i>	<i>Lamb</i>	<i>Poultry</i>	<i>Milk</i>	<i>Cheese</i>	<i>Butter</i>	<i>Margarine</i>
1938-1939	63.6 kg	6.8 kg	NA	106.4 L	2.0 kg	14.9 kg	2.2 kg
1948-1949	49.5 kg	11.4 kg	NA	138.7 L	2.5 kg	11.2 kg	2.8 kg
1958-1959	56.2 kg	13.3 kg	NA	128.7 L	2.6 kg	12.3 kg	NA
1968-1969	40.0 kg	20.5 kg	8.3 kg	128.2 L	3.5 kg	9.8 kg	4.9 kg
1978-1979	64.8 kg	14.4 kg	17.1 kg	100.5 L	5.3 kg	5.1 kg	8.5 kg
1988-1989	41.1 kg	14.9 kg	24.2 kg	101.0 L	9.0 kg	2.9 kg	9.0 kg
1994-1995	36.2 kg	11.5 kg	28.1 kg	103.0 L	10.3 kg	3.1 kg	7.3 kg
1995-1996	34.4 kg	11.0 kg	27.4 kg	104.3 L	10.6 kg	3.0 kg	7.2 kg

NA = Figures not available

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Refer to the information in the table. Describe how FOUR of the following factors have influenced food consumption patterns in Australia.

- Historical developments
- Technology
- Multiculturalism
- Lifestyle changes
- Health and nutrition
- Marketing, including advertising strategies

Above Average responses

Candidates who achieved marks in this range were able to provide in-depth discussion of each factor with extensive references to the table. They either used the table to reinforce the discussion of the relevant factor and / or chose several foods and discussed increases and decreases in consumption, with support provided in discussion of the factor. These candidates demonstrated capacity to interpret, substantiate and provide detailed and factual information in relation to the consumption table.

Average responses

These candidates were able to provide an in-depth discussion of how the factors influenced consumption but made little reference to the table. At times discussion of the factors was sound, however, poor analysis of the table and failure to relate consumption data from the table to the discussion meant that there was inadequate explanation of how consumption patterns have changed.

Below Average responses

These responses were limited to brief discussion of the relevant factors and / or minimal reference to the table. Information was sometimes inaccurate and interpretation of the table poor. Discussion generally focused on the role of each factor in the home situation and did not consider broader issues in the Australian Food Industry. Some candidates approached the question by discussing individual foods rather than selecting factors from the options available. In these cases, it was very difficult to link such information to the table or the factors. Other below average responses included repetitive information or statistical information rewritten from the data provided in the table.

Generally, discussions of the 'lifestyle' and 'health and nutrition' influences were better. In these areas candidates were able to focus on changes relevant to the 1990s.

Question 15 - Food Marketing

(Attempt EITHER Question 15 OR Question 16)

Market Research is an important step in the food marketing process to determine consumer acceptance.

Select ONE of the following products and answer the questions below:

- *high fibre, vitamin enriched noodles*
- *high calcium, low fat yoghurt*
- *partially prepared and packaged fresh vegetables*
- *marinated raw meat and vegetable stir-fry mixes.*

Food product selected:

- (a) Select and define a possible target market for this product.*
- (b) List and describe FOUR data collection procedures you would use to determine levels of consumer acceptance for this product.*
- (c) Outline TWO major considerations when setting prices for this product.*
- (d) How might the marketing of this product affect community health?*

Above Average responses

These were the responses of candidates who gave detailed descriptions of all parts of the question. Their answers demonstrated excellent understanding of each section and included appropriate examples, explanations and information. Part (b) was well answered and included a wide variety and description of each type of data collection procedure. In part(c) candidates identified the importance of competition, affordability / willingness to pay, production and packaging costs as well as the relevance of quality. In part (d) responses linked the food product to the deficiency diseases, with some also recognising environmental health issues.

Average responses

Scripts in this category showed limited understanding of the question. They dealt with the approximate area of the question but left significant gaps in the information provided. Frequently only one reason was provided — this was especially evident in part (c). Information tended to be restricted, without evidence by which to identify target markets, to show how data was collected or the impact of food choices on community health.

Below Average responses

Scripts in this category were largely incomplete. Sections of the answer were either not attempted or limited to general statements rather than providing detailed description or explanation. Some candidates in this category appeared to have answered the question when, in fact, their answers related to Food Product Development. Part (d) frequently included statements about the community or the environment, without any reference to the effect of marketing on the health of the community.

Generally, answers to part (a) were more thorough, with candidates identifying a target market relevant to the product discussed. The most popular product was ‘high calcium’, low fat yoghurt. Part (d) was not well understood, and the concept of community health was unclear to many candidates. Issues discussed ranged from consumption information to environmental issues, all of which affect community health.

Question 16 - Food Product Development

The Frozen Delite Company has recently developed a new gourmet, single-serve ice-cream product. The product is chocolate-coated and contains premium vanilla ice-cream.

- (a) (i) *Define the following food product development terms:*
- 1 *Me too*
 - 2 *Line extension*
- (ii) *List FOUR possible line extensions for this product.*
- (b) *Describe the steps involved in the development of ONE of the line extensions in part (a).*
- (c) *Outline the packaging requirements for your product.*
- (d) *Discuss the storage and distribution system that would be required for your product.*

Above Average responses

Candidates in this range were able to accurately define the terms ‘Me Too’ and ‘Line Extension’, providing examples. Four distinct versions of line extensions were common in (a) (ii), with candidates selecting a line extension and then describing steps involved in developing that item. Packaging requirements specific to the selected line extension were discussed and justified, while both storage and distribution considerations for the line extension were well explained.

Average responses

In this range candidates provided an adequate definition of 'Me Too' and 'Line Extension', but usually failed to give examples. Versions of line extensions were rather limited. Candidates could describe the steps involved in developing a line extension, its packaging requirements and storage / distribution considerations, however, they did not link this directly to their selected line extension.

Below Average responses

Generally candidates in this range could not define the food terms 'Me Too' or 'Line Extension'. Versions of line extensions given were very limited, perhaps only suggesting a change in flavour or type of ice-cream coating. Limited knowledge was shown of the steps involved in developing a line extension, with very few steps being identified. Discussion regarding packaging, storage and distribution was very limited.

Section III (40 marks)

Attempt TWO questions, ONE from each part.

PART A - Core strands

Question 17 - Food Manufacture

There are many types of additives used in processed foods.

- (a) Why are additives used in processed food?*
- (b) Discuss TWO additives that are commonly used in processed foods.*
- (c) Detail the food legislation that controls food additive labelling in Australia.*

Above Average responses

- (a) Candidates in this category gave a wide range of uses / functions of additives. The additives were listed in groups illustrating their use, with clear explanations including relevant examples being given.
- (b) Two distinct and different additives were used. Information indicated why they were used, identifying correct food examples, correct chemical name and correct code number. Advantages and disadvantages were identified, as well as issues of consumer concern.
- (c) Information given was current, eg ANZFA, labelling laws were addressed specifically, including information required under legislation as well as appropriate reference to the legal use of additives in Australia. Some candidates referred to the international code number standards as being the origin of the Australian system.

Average responses

- (a) In these responses, candidates displayed limited knowledge of the functions of additives, which were frequently identified only by a list, eg colours, flavours as being the reason for their use. Explanations were superficial. Occasionally examples were given.
- (b) The range of additives used was more limited and examples of foods were not necessarily related to the additives mentioned. In these responses, candidates listed more than two additives without any discussion of them or of their use.
- (c) Limited knowledge of legislation was shown here, although some candidates did identify ANZFA. Discussion was frequently about labelling in general, with reference to additives in foods being non-specific.

Below Average responses

- (a) These responses frequently identified a small number of functions of additives in food but gave no explanation of any reasons for their use. Colours and flavours were most commonly mentioned, although examples were often incorrect and unrelated.
- (b) Responses were confused, using incorrect terms and information on use and functions and providing little discussion.
- (c) General legal requirements of food labelling were stated, however, they were not related to additives. In many cases legislation was incorrectly named.

Question 18 - Food Manufacture

'Paper is a better packaging material than plastic.'

Discuss this statement in relation to food products and the environment.

Above Average responses

In these responses, candidates provided a balanced argument, discussing both products and environment, while positive and negative aspects of packaging were also identified. Their arguments were supported with sound explanations and led to a sound conclusion. Information was well organised and there was little repetition. These candidates also discussed recent technologies such as MAP, CAP and cryovac packaging to illustrate how manufacturers make good use of packaging materials and their properties in relation to both the food product and the environment.

Average responses

Here candidates tended to list the properties and failed to give detailed explanations and examples. Their answers made little reference to the wider range or forms of packaging materials. Information was often repeated, and there was a tendency to dwell on only a small number of very obvious arguments. These candidates often discussed only one aspect of the question, ie food products or the environment, at times limiting their arguments to paper or plastic only.

Below Average responses

Candidates in this category tended to dwell on only environmental and community issues, trying to convince the reader that paper was the preferable material. Information given was generalised, and had little or no relationship to food technology. Many gave general information about packaging and did not relate it to either paper or plastic. These answers lacked depth of knowledge, information was frequently repeated and rarely were there explanations or examples.

Question 19 - The Australian Food Industry

Australian consumers expect a food supply that is free from contamination.

Discuss how each of the following levels of government supports a safe food supply.

- (a) *Federal*
- (b) *State*
- (c) *Local*

Above Average responses

Here candidates showed a clear knowledge of the relevant legislation for each level of government as well as the relationship between them. They provided a detailed explanation of the role / function of each Act, and then provided a discussion of the relevant Acts, showing how they assist in the provision of a safe food supply. Additionally, these candidates supplemented their answers with relevant examples and a number were able to include extra analysis of food standards as well as surveys such as Market Basket Survey and how laws ensure safety. These responses also discussed current food safety standards being introduced / modified by ANZFA.

Average responses

In these responses, candidates listed some legislation and provided limited explanation and / or examples. Often they listed laws such as the Noise Pollution Act that did not apply to food safety. Although these candidates had some basic understanding of legislation, they often used incorrect Acts, confused the legislation applicable to different levels of government and often relied on rote learning of an Act such as the Trade Practices Act without indicating its relationship to the question and a safe food supply in particular.

Below Average responses

The candidates in this category had limited understanding of any relevant legislation and its application to a safe food supply. Some were able to name Acts only, while others were unable to provide a name but gave a non-specific explanation. These candidates often provided repetitious discussion of Health Inspectors at the local level, and few mentioned Acts relating to the jurisdiction of the Environmental Protection Authority. Almost all these candidates were unable to relate any relevant legislation to a safe food supply. They confused Federal, State and Local Acts / jurisdictions, and provided little or no explanation of how the specific legislation actually works.

Question 20 - The Australian Food Industry

Discuss current trends and possible future directions for the Australian food industry.

The question was very broad. Many candidates discussed trends and innovations as being one and the same and failed to discuss future directions. Occasionally a heavy emphasis was placed on genetic engineering. Some discussed trends, with varying levels of success, under the headings Primary, Secondary and Tertiary Industries. Other than the six trends mentioned in the Syllabus, some candidates also included others such as trade issues, marketing practices, farming / manufacturing techniques, automation, ecology / environment, foods for specific groups, shopping (hours, EFTPOS, internet), ethics, MAP and Government policies.

Above Average responses

In these responses, candidates covered a very wide range of current trends that related to primary, secondary and tertiary areas of the food industry, without relating them to specific areas or divisions. Most current trends discussed came under the general heading of changing consumer demands, ownership concentration, policy changes, farming practices / types, environment, the government, initiatives relating to trade, tariffs and manufacturing practices. These candidates possessed a solid understanding of such trends, justifying each with relevant explanation and current examples. They were also able to link these trends to innovations such as genetically modified foods, irradiation, the organic food industry, functional foods and innovative areas of packaging. The better candidates went further and projected these trends into the future, discussing possible developments that may take place.

Average responses

Here candidates were able to provide some knowledge of current trends related predominantly to changing consumer demands, convenience, lifestyle and multiculturalism. These candidates provided limited discussion of innovations and were unable to provide a wide view of current trends. In most of these responses two areas of information were most commonly omitted — namely a lack of discussion of the future of the Australian Food Industry and an inability to discuss future directions.

Below Average responses

Candidates demonstrated a poor knowledge of current trends and future directions. Usually only one or two trends were discussed, giving limited explanation and showing little relevance to the food industry. These candidates generally emphasised changing consumer demands and lifestyle changes. They gave limited discussion of how / why, and the relationship of current trends and future innovations. Some candidates discussed food manufacturing in general, making no reference to current trends and future directions.

PART B - Options

Question 21 - Food Marketing

Generic products have become an important part of the market for many foods.

- (a) Explain the advantages and disadvantages of marketing generic brands.*
- (b) Compare the marketing strategies for a brand name product with those for a similar generic product.*

Above Average responses

Candidates provided in these responses clear definitions of generic products and marketing as well as a comprehensive, well explained list of the advantages and disadvantages of generic products. Their answers showed a clear understanding of the fact that generic products have inherent problems when they are marketed.

In part (b) candidates specified a brand name and a generic product, comparing the marketing strategies for both in a well focused discussion. They outlined how differences and similarities exist for each product type throughout each stage of the marketing process.

Average responses

Candidates provided a very basic and limited listing of advantages and disadvantages. In part (b) insufficient information was provided. Comparisons were minimal and, although the Four Ps were listed, they were not expanded in enough detail.

Below Average responses

The minimal information provided in these responses was often repetitive and/or irrelevant. Candidates might have listed only one or two advantages and disadvantages but they did not link them to marketing aspects. This type of response showed that some candidates had difficulty in identifying comparisons of the marketing strategies for a brand name product and a similar generic product.

Question 22 - Food Marketing

'Marketing is more than advertising'.

Discuss this statement.

Above Average responses

Here candidates clearly differentiated between marketing and advertising with thorough definitions. In their responses they discussed the steps involved in marketing, identifying opportunities, needs, wants, SWOT analysis, market segmentation, target market, and the Four Ps and included an evaluation of the process. These candidates highlighted the place of advertising and examined it in relation to marketing.

Average responses

In these responses candidates discussed marketing and the implications of the Four Ps but showed limited knowledge of the relationship of marketing to advertising. In these responses, some attempt was made at listing some of the concepts of marketing, but discussion was minimal.

Below Average responses

Many of the responses in this category were incomplete, with information being limited to poor definitions of marketing and advertising. This type of response did not distinguish between the two concepts. Discussion of the Four Ps was limited to price or promotion only, with information being focused on cost or examples of media advertising.

Question 23 - Food Product Development

Food products are developed for specific consumer groups. List TWO product types most suitable for each of the following, and give reasons for your answer.

- (a) Single person households*
- (b) Single income large families*
- (c) Double income couples without children*
- (d) Elderly married couples*

Above Average responses

These responses included all 4 stages (a – d) and gave two different examples of food product types so that two different and distinct reasons could be discussed. Through discussion of these reasons candidates were able to define and describe the consumer group adequately.

Average responses

These responses discussed only two products for each group without giving an appropriate example. The reasons given for product use were brief or did not relate to a specific food product. Some candidates used only two products for all four groups, which resulted in repetitious reasoning. A number spent too much time in defining the consumer group and gave lengthy descriptions of the food product or provided similar products which restricted their discussion.

Below Average responses

These responses were often disjointed and did not respond to all parts of the question. They often listed food products without giving an adequate description of how the product catered for the specific consumer group. This type of response showed candidates' difficulty in understanding the needs of each consumer group. Some candidates misinterpreted the question, discussing only two consumer groups.

Question 24 - Food Product Development

Discuss the development of a commercial food product that addresses an environmental issue.

Above Average responses

Here candidates presented a full understanding of the development of a commercial food product together with an integrated discussion of how it deals with an environmental issue. They were also able to discuss the development of a specific food product. Appropriate terminology was used, supported by thorough and accurate discussion that related to the food product being developed.

Average responses

In these responses, candidates showed a reasonable understanding of the question. They dealt with some of the stages in the development of a commercial food product while attempting to integrate the factors relating to an environmental issue. Discussion was not always thorough in these responses.

Below Average responses

The discussion provided in these responses was limited to the listing of a commercial food product, supported by one or two disjointed statements regarding either stages in development or an environmental issue such as packaging. Responses were lacking in detail and showed poor interpretation of the question.

3 Unit (Additional)

Section I

Attempt ONE question.

Question 1

Food industry decisions are based on company policy.

- (a) What is 'company policy'?*
- (b) In formulating a company food policy, which government regulations need to be considered?*
- (c) Design a company food policy for a local school canteen.*

A very small number of candidates attempted this question.

Above Average responses

Here candidates showed a very clear understanding of the question. They provided a thorough definition of company policy and were able to relate government regulations to food company issues. A wide variety of sample policies were designed that covered issues such as consumers, food selection, pricing, and nutrition as well as health and safety.

Average responses

Most candidates here could define company policy but were limited in their knowledge of government regulations. In part (c) of the question they wrote in general terms with only limited discussion of a food policy.

Below Average responses

In these responses, candidates showed little understanding of all aspects of the question. They misunderstood or did not know the government regulations and were concerned only with health and safety issues.

Question 2

Australian consumption of canned and bottled water has increased by almost one-third in the past year. Sales of more than two hundred brand names remain high despite a cooler than usual summer.

With reference to the above statement, explain how TWO of the following could account for these consumer choices:

- (a) Lifestyle and culture*
- (b) Health concerns*
- (c) Environmental awareness*
- (d) Advertising*

'Environmental awareness' was the most poorly answered section, with candidates making sweeping generalisations that were wrong or irrelevant.

Above Average responses

For each of the two options, candidates explained how four or five different points contributed to the increased consumption of bottled water and supported their arguments with relevant examples. They were also able to demonstrate how such examples contributed to continued high sales of bottled water despite cooler weather. Information provided was both accurate and detailed.

Average responses

In these responses, candidates were able either to discuss two or three points for each option, providing relevant examples to support their discussion, or to complete one option in adequate detail, with the second option generally providing limited or repeated information. Some candidates in this category related their discussion to water consumption in general rather than to continued high sales of bottled water in cooler weather.

Below Average responses

Candidates either provided general discussion of one option or dealt poorly with more than one option. Their answers did not give accurate or relevant examples to show how their options account for an increase in bottled water sales.

Section II

Attempt ONE question.

Question 3

Study the following dietary guidelines that come from an Asian country.

Compare and contrast these guidelines with the Australian Dietary Guidelines.

1 *Ensure well-balanced nutrition by eating a variety of foods.*

- *eat 30 foodstuffs per day*
- *eat your main dish together with the staple food and side dish.*

2 *Match your energy intake with your daily activity.*

3 *Consider the amount and the quality of the fats and oils you eat.*

- *avoid too much fat*
- *eat more vegetable oils than animal fats.*

4 *Avoid too much salt.*

- *not more than 10g per day.*

5 *Remember: happy eating makes for happy family life.*

- *sit down, eat together and talk.*
- *savour home cooking and make the most of the opportunity to be together.*

(Brooker, S, Allotta, E, Brown, R, Unqhardt, J, *Senior Food Technology: Preliminary Course*, McGraw Hill Book Company, Sydney, 1996)

Above Average responses

In these responses, candidates were able to provide a well structured and logical discussion of similarities and differences in the five Asian guidelines with those of the equivalent Australian Dietary Guidelines. Answers in this category displayed a thorough knowledge and understanding of all other Australian Dietary Guidelines.

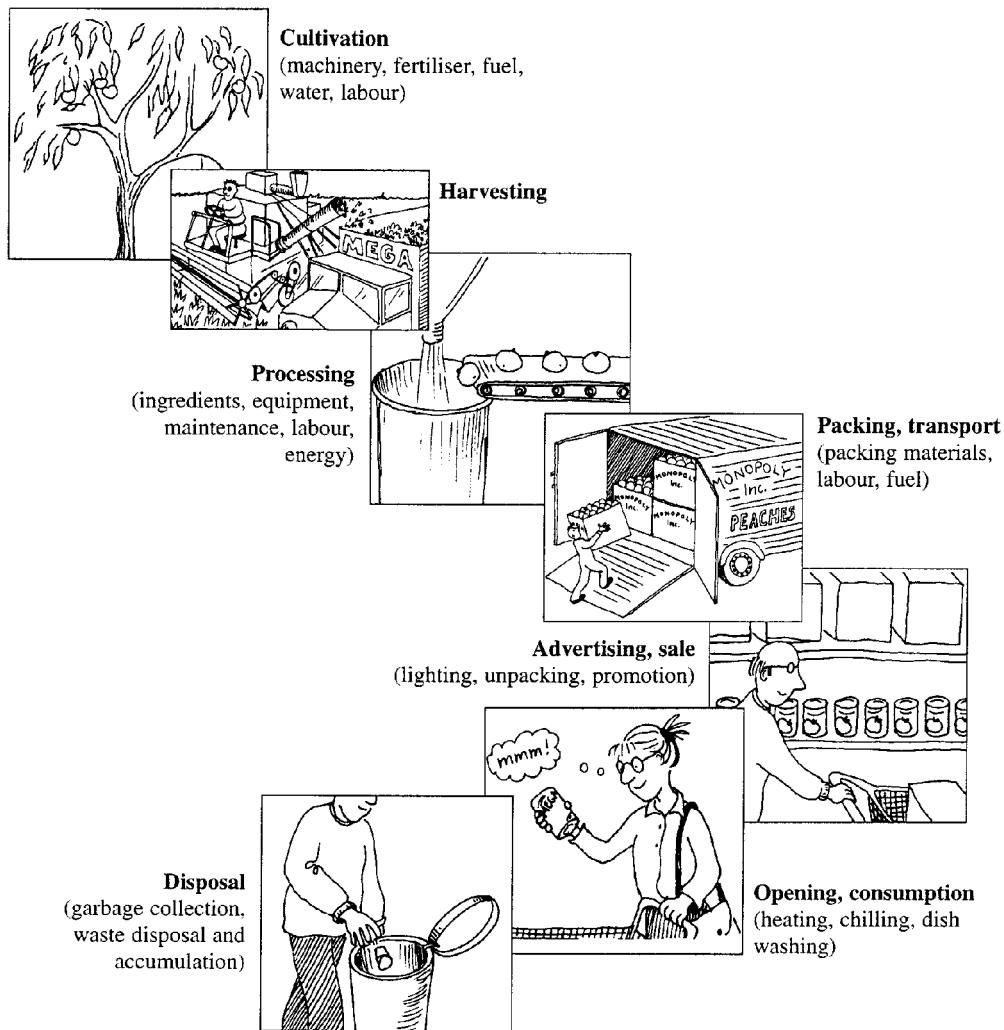
Average responses

Here candidates wrote in general terms, with limited discussion, in which they tended to compare but not contrast the two sets of dietary guidelines. Most responses were able to show some general knowledge of the Australian Dietary Guidelines.

Below Average responses

Candidates in this category showed limited knowledge and understanding of the Australian Dietary Guidelines with minimal or no discussion when comparing and contrasting them with those from an Asian country. In discussing the guidelines, irrelevant information relating to history, development and diseases of affluence was included. Many students were critical of the Asian Guidelines and felt that they needed to make a value judgement.

Question 4



Cradle-to-grave (life-cycle) analysis of food products looks at the cost of a food product from the beginning of production to the final product.

Using the diagram given, discuss changes that could improve this product in relation to the health of the consumer and impact on the environment.

Above Average responses

These responses showed a clear understanding of the question, making good use of appropriate language and logical development of discussion. Candidates attempted to discuss every stage of the diagram, indicating changes that could improve both the environment and the health of consumers. Answers in this category often indicated a good understanding of the following issues: – organic fertilisers, recycling and water usage, solar energy, genetic engineering, composting, pollution concerns, additives, labelling, serving suggestions and company policy.

Average responses

In these responses candidates distinguished between the different stages of the canning process but they lacked depth in their explanation of improvements that could be made to benefit both the health of the consumer and the environment. Often candidates could provide explanations for only one of the issues: health or the environment.

Below Average responses

Candidates in this category did not understand the question which led to the provision of inadequate or incorrect information. Their answers discussed mainly food manufacture and the steps involved in the canning of peaches. Discussion of their application to consumer health and the environment was limited and often repetitious.

Independent Research Project

The quality of the projects presented this year was of a high standard and covered a wide range of topics. The following projects were awarded prizes:

- Lies, deception and misinformation: the new staple foods? (HEIA, NSW Division)
- The health benefits and consumer awareness of Omega 3 fatty acid. (FTA NSW)
- To examine the importance of folate in the diet for women of child bearing age. (UWS)
- The labelling of genetically engineered food. (UNSW)

The following comments have been generated to assist teachers in guiding 3 Unit candidates in the preparation of the IRP.

General Comments

- Excellent IRP's include a variety of relevant primary research well analysed and supported by secondary data.
- It is essential that the IRP is set out to clearly meet syllabus criteria.
- The topics chosen by candidates must remain narrowly focused and within the context of Food Technology. The choice of a narrow focus question allows for the development of specific methodology and research techniques.
- It is not necessary to submit all resource material with the project.
- It is important that candidates adhere to the word length of the IRP. Overlength scripts are penalised.
- It is essential that projects do not identify candidate, teacher or school in any way.
- Candidates should be encouraged to edit their project before submission.
- All pages of the project should be numbered.
- Progress report sheets should be submitted with the project.
- The correct method of citation should be used.
- A contents page at the beginning of the IRP is advised.
- The resource list should be annotated providing a brief statement of the contents of each item and some comments as to its relevance.
- Appendix information should be kept to a minimum. Any information in the appendix must be directly referred to in the body of the project. Analysis of results and graphs should be included in the main body of the project.

Specific Comments

Synopsis

The synopsis should be a comprehensive yet clear and concise description of what the IRP is about, how and why the primary and secondary research was conducted and the actual findings of the research. It should be written at the completion of the project. Poor attempts are usually very brief and do not adequately describe the topic, the research techniques and the findings.

Rationale

The rationale must clearly state the aims of the research. Better scripts will usually have several sub-aims and they are very specific. The relevance, importance and benefits of the research are stated and better projects explore more than personal reasons. Poor projects usually have poorly defined aims, the rationale is repetitive and becomes confused with the synopsis.

Body

The body of the project should contain:

- a review of the literature used
- an explanation of the primary and secondary methodologies
- an analysis and discussion of the results
- a linking of primary and secondary research.

In addition to the above points an above average project should be presented in a logical manner, with ideas clearly communicated and expressed. Secondary research should be clearly referenced and not just copied. The methodologies used should be clearly explained and relevant to the aims set. Better scripts will utilise more than one type of primary research, will be well analysed and interrelated with secondary research. Evidence should be provided of interaction with the wider community and/or industry and relevant appendix material should be referred to and discussed.

Conclusion

The conclusion should draw together the aims that have been set from research and investigations undertaken. Above average projects will make and discuss recommendations for consumers, industry, government, recommend further research and acknowledge the limitations of their research. Below average projects are usually limited to general statements of main findings with no evidence of analysis.

Resource List

Candidates should be encouraged to use a wide variety of up-to-date resources, including both primary and secondary sources. When referencing, the following details should be stated:

- author
- publisher
- date of publication
- name of the article/book/journal
- ISBN number.

Internet sites must include the website address and date. Annotations should clearly discuss how the resource was used and its usefulness to the research.

Diary

It is important that the diary entries are continuous and that they include a clear, descriptive account of the progress of the candidate during the development of the IRP. Only information relating to the development of the project should be included. The preferred method of recording the diary is on A4 paper as part of the IRP rather than as a separate book. The usual length of the complete diary is four to six pages.

Note: A checklist has been provided at the end of this report to assist candidates and teachers in the preparation of their IRPs. This checklist is used by the HSC markers to review the nature of each IRP.

FOOD TECHNOLOGY INDEPENDENT RESEARCH PROJECT

COMPONENTS OF THE REPORT	Inadeq	B/Av	AV	A/AV	Excell	Comments
A. Synopsis (200 words)						
(i) comprehensive summary						
(ii) conclusion drawn						
B. Rationale (200 words)						
(i) aims of study						
(ii) relevance/importance/benefits						
C. Conclusion						
(i) main finding drawn together						
(ii) recommendations						
D. Resource List						
(i) accurate/variation in research?						
(ii) annotations?						
E. Diary						
(i) convincing and genuine?						

THE BODY OF THE REPORT	Inadeq	B/Av	AV	A/AV	Excell	Comments
(i) How well have secondary sources been researched/ reviewed?						
(ii) How well have the methodologies been explained?						
(iii) How appropriate are the methodologies to the claims?						
(iv) How well have the primary sources of research been used?						
(v) How well has the research been analysed and interpreted?						
(vi) How well has the relationship been made between primary and secondary research?						
(vii) Is there evidence of interaction with the community/commercial/ industrial domains?						
(viii) How well is it focused on: technological activities, scientific aspects and/or issues of food technology?						
(ix) How well are the ideas communicated and expressed?						
(x) Is the project organised well?						
MARKER COMMENTS:						