

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER

Letter

Figures

Words

VICTORIAN CURRICULUM AND ASSESSMENT AUTHORITY



**Victorian Certificate of Education
2001**

FOOD AND TECHNOLOGY

Written examination

Monday 19 November 2001

Reading time: 11.45 am to 12.00 noon (15 minutes)

Writing time: 12.00 noon to 1.30 pm (1 hour 30 minutes)

QUESTION AND ANSWER BOOK

Structure of book

<i>Number of questions</i>	<i>Number of questions to be answered</i>	<i>Number of marks</i>
10	10	100

Materials

- Question and answer book of 15 pages.

Instructions

- Write your **student number** in the space provided on this book.
- All written responses must be in English.

Instructions

Answer **all** questions.

Question 1

It has been estimated that of every 50 food product ideas proposed by food manufacturers, 45 ideas are discarded at the design brief stage. The remaining 5 ideas result in prototypes. Only 2 of these prototypes go into production and only 1 proves commercially successful. Explain why a food product might be eliminated at each of the following stages.

i. design brief stage

ii. prototype stage

iii. retail sale stage

6 marks

Question 2

a. A recent trend in food packaging has resulted in soup being sold in plastic pouches by The Super Soup Company. When developing this product explain how each of the factors below could have affected the packaging design.

i. environmental concerns

ii. properties of the soup

iii. method of distribution and storage

3 marks

b. The Amazing Soup Company has developed a direct copy of the soup in pouches.

i. What term is used to describe this type of product development by The Amazing Soup Company?

ii. Explain why The Amazing Soup Company has developed this direct copy.

1 + 2 = 3 marks

- c. The Super Soup Company has also released a low-salt variation of the original soup.
 - i. What term is used to describe this type of product development by The Super Soup Company?

- ii. Explain why The Super Soup Company produced this soup.

1 + 2 = 3 marks

Total 9 marks

Question 3

Refer to the graph shown in Figure 1 when answering this question.

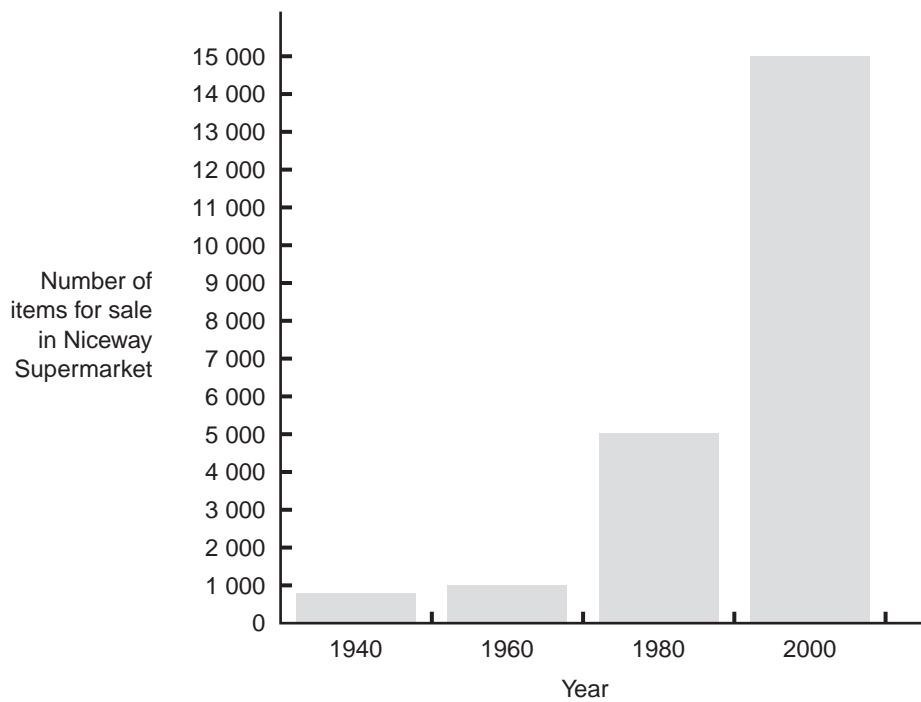


Figure 1

a. Explain how each of the following factors may have led to an increased number of food products on supermarket shelves.

i. social pressures

ii. technology changes

iii. consumer demand

iv. industry economics

8 marks

- b. Describe a recently developed packaging technique that has led to an increase in the number of food products available.

2 marks

- c. Modified products have accounted for some of the increase in the number of products available. Define the term modified product.

1 mark

- d. Name an existing product and identify a modified form of this product.

Existing product _____

Modified product _____

The properties of products include appearance, nutrient content, flavour, texture or consistency, aroma and mouth feel. Select **four** properties from this list and write them in the table below. For each property explain the difference(s) between the modified food product and the existing product.

Selected property	Explanation
1.	<hr/> <hr/> <hr/>
2.	<hr/> <hr/> <hr/>
3.	<hr/> <hr/> <hr/>
4.	<hr/> <hr/> <hr/>

4 marks

- e. Provide **one** example to explain why specific tools/equipment or methods of preparation are selected when using modified food products.

2 marks

Total 17 marks

Question 4

To date ANZFA [Australian and New Zealand Food Authority] has found no evidence that GM Foods [Genetically Modified Foods] are less safe than their conventionally produced counterparts – a finding supported by food agencies around the world.

ANZFA – August 2000

From your understanding of genetic engineering, discuss the advantages and disadvantages of genetically modified foods (GM Foods) for both food producers and consumers. In your discussion, provide examples of food products that have been developed as a result of genetic engineering.

6 marks

TURN OVER

Question 5

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Figure 2

- a.** Natural food components include fats and oils, acids, alkalis, starches and sugars. Explain the role of each of the following food components in the Melting Moments shortbread biscuits illustrated in Figure 2.

- i.** fat/oil

ii. starch

iii. sugar

6 marks

b. i. Describe how the Melting Moments shortbread biscuit could be modified to create a line extension.

ii. Name a target market for this line extension and explain why it would appeal to this group.

iii. Explain **three** criteria which could be used to determine whether this line extension is acceptable to consumers.

1 + 2 + 3 = 6 marks

Total 12 marks

TURN OVER

Question 6

Most food commodities require some form of processing to become suitable for consumption.

- a. What is the purpose of primary processing?

1 mark

- b. Discuss the benefits of secondary processing for both the manufacturer and the consumer.

Manufacturer

Consumer

4 marks

- c. Identify **one** food commodity that undergoes secondary processing and describe the key steps involved.

3 marks

d. Discuss **two** environmental issues that may arise during food production.

4 marks

Total 12 marks

Question 7

The Cool Food Company has decided to produce a range of single-serve cook-chill gourmet pizzas aimed at the 20–30 year old market.

a. Describe the cook-chill process used to produce these pizzas.

2 marks

b. Describe **two** advantages of the cook-chill pizza that would make it more appealing to the target group than a frozen pizza.

2 marks

- c. Identify the packaging technique that you would choose for the new pizza and justify your choice of material(s) and design.

2 marks

- d. Identify **two** advertising or promotional strategies that you would use to market the pizzas and explain how each strategy would appeal to the target group.

Strategy 1 _____

Strategy 2 _____

4 marks

Total 10 marks

Question 8

- a. In order to prevent deterioration of food, processing techniques such as heating, freezing, dehydration, control of gaseous environment and use of chemicals and additives can be used.

Choose **three** of these processing techniques and explain how each technique prevents deterioration of food. Name a food product which is produced as a result of each technique.

Technique	Explanation	Example of food product

6 marks

- b. Food production systems include continuous processing and batch production. Compare the quantity and outcomes of these **two** systems in the production of food products.

4 marks

Total 10 marks

TURN OVER

Question 9

Mad cow product list hidden from consumers (*The Australian*, 24 February 2001) [adapted]

. . . ANZFA [Australian and New Zealand Food Authority] admits that Australia’s labelling laws make it difficult for consumers to know if a product contains beef from Europe, where mad cow disease (BSE) from infected beef has been linked to the brain-wasting CJD disorder in humans.

ANZFA spokesman Michael Dack said yesterday that consumers had to be ‘quite careful’ about buying imported beef products. ‘One of the difficulties we’ve encountered is that under current labelling regulations, the companies are not requested to put a country of origin of each ingredient,’ he said.

- a. This article highlights the importance of food labelling. Explain why food labelling is important to consumers.

3 marks

- b. Identify **three** labelling requirements that by law must be shown on the label of food products.

3 marks

- c. Explain the role of ANZFA in regulating food standards.

3 marks

Total 9 marks

Question 10

An outbreak of food poisoning occurred after a group of executives attended a dinner meeting at one of Melbourne’s finest restaurants. Some hours after eating the meal, which consisted of seafood cocktail, roast chicken and fruit salad with cream, many of the diners experienced severe abdominal pain, fever and vomiting.

a. Identify **three** unsafe food handling or storage practices that may have occurred in the above case study. Explain how each one may have led to the outbreak of food poisoning.

i. _____

ii. _____

iii. _____

6 marks

b. Situations such as the one described above have contributed to the development of the Hazard Analysis Critical Control Points (HACCP) system. Describe how the use of the HACCP system can ensure food safety.

3 marks

Total 9 marks