



Victorian Certificate of Education

2009

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER

Figures

Words

Letter

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FOOD AND TECHNOLOGY

Written examination

Tuesday 17 November 2009

Reading time: 9.00 am to 9.15 am (15 minutes)

Writing time: 9.15 am to 10.45 am (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>
7	7	100

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape.
- No calculator is allowed in this examination.

Materials supplied

- Question and answer book of 18 pages.

Instructions

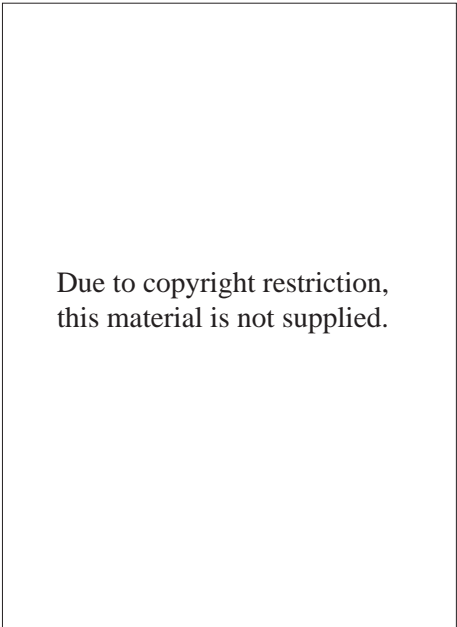
- Write your **student number** in the space provided above on this page.
- All written responses must be in English.

Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.

Instructions

Answer **all** questions in the spaces provided.

Question 1



Kellogg's[®] produce a snack bar for children called LCMs[®] made from the breakfast cereal Rice Bubbles[®].

- a. Name the type of production system that Kellogg's[®] uses to manufacture LCMs[®] bars.

_____ 1 mark

- b. Outline **two** benefits to the manufacturer of this type of food production system.

_____ 2 marks

The marketing department at Kellogg's® is designing a new marketing campaign to promote the LCMs® bars.

- c. Describe two marketing strategies Kellogg's® could use to promote the LCMs® bars.

Strategy 1 _____

Strategy 2 _____

2 marks

When planning a marketing campaign for LCMs® bars, Kellogg's® should take into account ethical considerations.

- d. Explain what is meant by the term 'ethical considerations'.

2 marks

A competing manufacturer has produced a similar snack bar for children.

- e. Name this type of food product development.

1 mark

- f. Outline **two** reasons why the manufacturer has used this type of product development.

2 marks

Total 10 marks

TURN OVER

Question 2

Jam making is a popular method of preserving food such as fruit.

- a. Explain **two** reasons for preserving foods.

2 marks

Sugar has many functional roles in food preparation and processing. Two of the roles of sugar in jam making are to provide sweetness and to act as a preservative.

- b. Identify and explain two **other** functional roles of sugar in the preparation and processing of food.

Functional role 1 _____

Functional role 2 _____

4 marks

Jam is boiled during the cooking process. Boiling is a wet method of cooking.

- c. Name and describe one wet method of cooking food other than boiling. Give an example of a food cooked using this method to support your answer.

3 marks

- d. Jams can be either home-made or produced commercially.
- i. Identify **two** sensory and/or physical properties of the home-made and commercial jams that can be compared.

- ii. Name and describe a suitable test that you could use to compare one of the sensory and/or physical properties listed above.

Name of test _____

Description _____

2 + 3 = 5 marks

- e. All jam that is produced for sale must be labelled according to the Food Standards Code.

- i. Name the authority responsible for the development of the Food Standards Code.

- ii. Apart from food labelling, identify and describe **one** other type of information included in the Food Standards Code.

1 + 2 = 3 marks

Companies such as Cottee's and IXL make a range of jams for the consumer to purchase.

- f. Identify **two** labelling requirements, other than the product name, and explain how this information could benefit consumers.

Labelling requirement	Explanation

2 + 2 = 4 marks

Total 21 marks

Question 3**Design brief**

The annual Victoria Rock Eisteddfod Challenge is a spectacular event which involves schools from all around Victoria and includes performances by dancers, singers and musicians.

An all-day rehearsal for the performers from your school has been arranged. The six band members and the conductor of the Rock Eisteddfod band will be involved in all aspects of the rehearsal.

The organisers of the Rock Eisteddfod at your school have decided to provide a main course and sweet treat suitable to serve as lunch for the band members and the conductor. The food provided must promote healthy lifestyle choices. The main course will be served hot and must be filling to satisfy the members of the band as they will be rehearsing all day. Some foods must be prepared before the rehearsal day as the school hall where the lunch will be served only has facilities for reheating.

- a. Explain the role of the design brief in the process of developing food products suitable to serve to the Rock Eisteddfod band.

2 marks

- b. Outline two specifications contained within the design brief above.

Specification 1 _____

Specification 2 _____

2 marks

One of the key stages in the process of product development is the development of a production plan.

- c. Why is the development of a production plan important in producing food items for the Rock Eisteddfod?

2 marks

The following types of food would be suitable to serve for lunch for the band members.

- rice-based dishes
- pasta products
- savoury or sweet pastry products
- small cakes/biscuits

- d. i. Select **one** of the types of foods listed above and name **one** food item suitable to serve as a **main course** for the Rock Eisteddfod lunch. Justify how your decision will meet the requirements outlined in the design brief.

Food type _____

Food item _____

Justification _____

- ii. Select a **different** type of food from the list above and name **one** food item suitable to serve as a **sweet treat**. Justify how your decision will meet the requirements outlined in the design brief.

Food type _____

Food item _____

Justification _____

(1 + 1) + (1 + 1) = 4 marks

- e. Select **one** of the food items you have listed in **part d.** to complete the table below.
 - i. Identify **one** complex process used in the preparation of the food item.
 - ii. Outline two key steps involved in completing the complex process identified.
 - iii. Explain how you will judge when you have successfully completed each step.
 - iv. Describe the effect that the successful completion of this step has on the finished food item.

Food item _____	
Complex process _____	
Key step 1	Key step 2
Explanation of judgment made	Explanation of judgment made
Effect on finished product	Effect on finished product

1 + 2 + 2 + 2 = 7 marks

After the food items have been produced you should evaluate your planning and production activities.

- f. Explain why it is important to evaluate your planning and production activities.

2 marks

Total 19 marks

TURN OVER

Question 4

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The Flora[®] pro-activ[®] margarine pictured above is described as a novel food.

- a. Explain what is meant by the term ‘novel food’.

2 marks

Flora[®] pro-activ[®] is an example of a new and emerging food that has been produced through recent developments in technology.

- b. Using Flora[®] pro-activ[®] as your example, or another food product you have studied during the year, identify and describe the technological development that has enabled the new or emerging food to be produced.

Food product _____

Identification of technological development _____

Description _____

3 marks

c. A new competitor has just entered the market for cholesterol-lowering table spreads. The company is required to include a nutrition information panel on the product as part of the food labelling regulations. The company had considered including a health claim on the label of its new product.

i. Define the term 'health claim'.

ii. Explain why the Food Standards Code requires manufacturers to include a nutrition information panel on their product labels, but will not allow a health claim other than folate.

2 + 2 = 4 marks

Some products have been developed to meet the needs of people with food sensitivities.

d. Explain the meaning of the term 'food sensitivity'.

1 mark

Nut allergies are becoming increasingly common within the Australian population.

e. Identify **one** food sensitivity other than an allergy to nuts and name an ingredient or food item that has been developed for people with this sensitivity.

2 marks

Total 12 marks

TURN OVER

Question 5

Several of Melbourne’s best known chefs have signed the GM-Free Chefs Charter.

The chefs who have signed this charter are strongly opposed to serving genetically modified foods or ingredients. According to the GM-Free Chefs Charter, ‘GM foods pose a risk to their clientele and the nation as a whole’.

a. Describe the process used to genetically modify food.

2 marks

b. Outline two reasons why the chefs may believe genetically modified foods pose a risk to their clients.

1.

2.

2 marks

Other members of the community support the introduction of genetically modified food.

c. Describe two advantages genetically modified foods may provide to the community.

1.

2.

2 marks

One of the chefs who has signed the new GM-Free Chefs Charter is about to open a new restaurant. Before any restaurant opens, the food safety plan outlining its Hazard Analysis Critical Control Points (HACCP) system must be approved by local authorities.

d. Explain the purpose of a HACCP system.

2 marks

One of the dishes to be served in the restaurant is Chicken satay with jasmine rice. The HACCP system, for the preparation of this dish, includes the following steps.

- delivery and storage of the raw rice
 - preparation of the chicken
 - storage of the cooked rice
- e. Select **two** of the steps listed above in the preparation of the Chicken satay and jasmine rice.
- i. Identify **one** hazard that could occur at each step.
 - ii. Describe a corrective action the staff should take to overcome the hazard listed.

	Hazard	Corrective action
Step		
Step		

2 + 2 = 4 marks

Total 12 marks

TURN OVER

Question 6

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Ladybird Organics produces a range of fresh salad ingredients for consumers including the prepacked salad mix pictured above. This salad mix is packed using modified atmosphere packaging (MAP).

- a. i. Describe how food is packaged using modified atmosphere packaging.

- ii. List **two** advantages to Ladybird Organics and/or consumers of using modified atmosphere packaging to package its salad mix.

2 + 2 = 4 marks

- b. Ladybird Organics states that the packaging for its salad mix is environmentally friendly as it is derived from corn.
- i. Outline **two** environmental factors that Ladybird Organics would have considered when designing the type of packaging for this product.
 - ii. Explain how **each** of the factors identified can provide a benefit to the environment.

Factor	Benefit

2 + 2 = 4 marks

- c. Organic farming is considered to be an environmentally friendly method of producing food.
- i. Describe, in detail, how organic farming or another environmental issue in primary production can benefit the environment.

- ii. Explain how this environmental issue can provide an economic advantage for the primary producer.

2 + 2 = 4 marks

Consumer demand, social pressures and industry economics are factors that would have influenced Ladybird Organics in the development of its new range of fresh salad ingredients.

- d.** Select two of the factors listed above and explain how the factor selected would have influenced the development of the organic prepacked salad mix.

Factor 1 _____

Factor 2 _____

2 marks

Total 14 marks

Question 7

Cereals such as wheat and oats have a similar structure. They are made up of three main parts: the outer layer or husk containing fibre, the endosperm containing starch and the germ containing the protein, gluten.

- a. The starch from the cereal is a natural component in food preparation and processing.
- i. Identify **two** functional properties of starch in food preparation and processing.
 - ii. Describe the role in food preparation and processing of **each** of these functional properties.
 - iii. For **each**, name a food item that uses this functional property in its preparation and/or processing.

Functional property of starch	Description of role	Food item
1.		
2.		

2 + 2 + 2 = 6 marks

Gluten can play a very important role in many food products such as bread, pasta and pizza dough.

- b. Choose one of these food products and explain the role of gluten in this product.

Food product _____

Role of gluten _____

2 marks

Cereals undergo primary and secondary processing before they are used to manufacture ingredients and food products.

- c. Outline **two** reasons for the primary processing of cereals such as wheat or oats.

2 marks

Secondary processing turns primary processed ingredients into other food products.

- d. List **two** benefits to the consumer or manufacturer of secondary processing of wheat or oats.

2 marks

Total 12 marks

