

STUDENT NUMBER Letter

FOOD STUDIES

Written examination

Friday 17 November 2017

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

Section	Number of questions	Number of questions to be answered	Number of marks
A	15	15	15
B	11	11	85
			Total 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 correction fluid/tape.
- No calculator is allowed in this examination.

Materials supplied

- Question and answer book of 22 pages
- Answer sheet for multiple-choice questions

Instructions

- Write your **student number** in the space provided above on this page.
- Check that your **name** and **student number** as printed on your answer sheet for multiple-choice questions are correct, **and** sign your name in the space provided to verify this.
- All written responses must be in English.

At the end of the examination

- Place the answer sheet for multiple-choice questions inside the front cover of this question and answer book.

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

SECTION A – Multiple-choice questions**Instructions for Section A**

Answer **all** questions in pencil on the answer sheet provided for multiple-choice questions.

Choose the response that is **correct** or that **best answers** the question.

A correct answer scores 1; an incorrect answer scores 0.

Marks will **not** be deducted for incorrect answers.

No marks will be given if more than one answer is completed for any question.

Question 1

Which one of the following is an optional piece of information to include on a food label?

- A. lot identification
- B. directions for use
- C. weight of contents
- D. nutrition content claims

Question 2

Which one of the following is a practical step that an individual could take when considering their food choices and the environmental impact of these choices?

- A. Consume food according to the recommendations of the 'Australian Guide to Healthy Eating' (part of the 'Eat for Health' program).
- B. Select food packaging that can be sent to a landfill site.
- C. Use leftover vegetables to make soup.
- D. Purchase only convenience foods.

Question 3

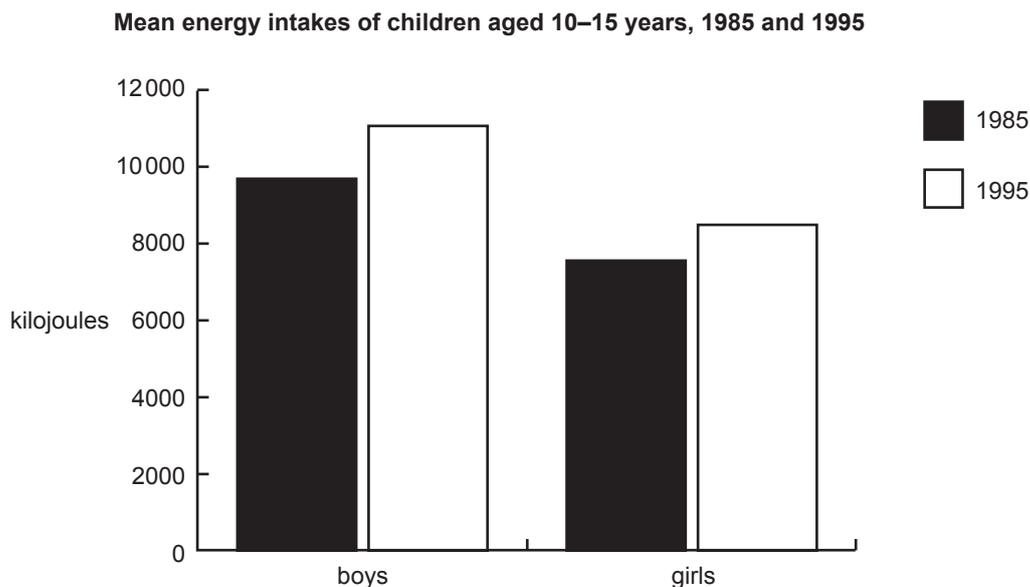
In which part of the digestive system does enzymatic hydrolysis of food occur?

- A. liver
- B. pancreas
- C. large intestine
- D. small intestine

Question 4

Which macronutrients most likely contribute to the energy intake of children?

- A. fat, protein and iodine
- B. fat, protein and carbohydrate
- C. fat, protein and B group vitamins
- D. fat, carbohydrate and B group vitamins

Question 5

Source: National Health and Medical Research Council, *Australian Dietary Guidelines*,
National Health and Medical Research Council, Canberra, 2013, p. 16

Based on the graph above, which health consequence were children aged 10–15 years more likely to experience in 1995 compared with children aged 10–15 years in 1985, assuming their energy expenditure remained the same?

- A. reduced risk of being overweight
- B. increased risk of being overweight
- C. reduced risk of developing type 2 diabetes
- D. increased risk of developing type 2 diabetes

Question 6

Which of the following are dry methods of cooking?

- A. grilling, steaming and roasting
- B. grilling, poaching and boiling
- C. grilling, stewing and baking
- D. grilling, baking and frying

Question 7

In Australia, basic nutritious food in rural and remote communities can cost up to 30% more than in capital cities and be less available.

This is an example of which social factor influencing food accessibility?

- A. income
- B. location
- C. discrimination
- D. cultural norms

Question 8

One of the disadvantages of organic food production is that

- A. biodiversity is easier to maintain.
- B. the salinity levels of waterways decrease.
- C. more land is required to produce a yield that is equal to that of conventional farming.
- D. soil health improves due to the reduction in the use of synthetic chemicals, which can be found in fertilisers and pesticides.

Question 9

The following advice is provided to parents of children who are fussy eaters: 'At mealtimes, offer children the same food that you are eating.'

This advice reflects which key behavioural principle for the establishment of healthy diets?

- A. modelling
- B. marketing
- C. regulation
- D. exposure

Question 10

Which one of the following activities is most likely to contribute to loss of biodiversity?

- A. consuming imported food products
- B. monitoring the quality of water
- C. clearing land for agriculture
- D. transporting food

Use the following information to answer Questions 11 and 12.

Kangaroo meat is now commonly found in supermarkets and on the menu in restaurants.

A consumer survey in *Choice*TM magazine found that only just over 50% of Australians have eaten kangaroo meat. Many people give environmental and ethical reasons for why they consume kangaroo meat.

Question 11

Which one of the following statements represents an environmental sustainability issue that people who eat kangaroo meat might feel is important?

- A. Kangaroo meat is very lean and a good source of protein, iron and zinc.
- B. All kangaroo meat sold comes from kangaroos harvested from wild populations.
- C. Kangaroo meat can be easily added to an individual's existing red meat consumption.
- D. Kangaroo meat contains levels of bacteria comparable to or lower than other red meats.

Question 12

Which one of the following statements represents an ethical issue that might be important to people who eat kangaroo meat?

- A. Kangaroo meat is more economical to purchase than other red meats.
- B. Kangaroos produce much less methane (a type of greenhouse gas) than cows and sheep.
- C. Kangaroos are harvested in their natural environment and are not put under unnecessary stress by humans.
- D. Kangaroo meat is exported to over 40 countries globally and the industry is worth approximately \$150 million annually.

Question 13

To reduce sugar intake using the evidence-based recommendations of the *Australian Dietary Guidelines* (part of the 'Eat for Health' program), an individual should

- A. eat more natural and fresh foods.
- B. follow a high-protein, high-fat diet.
- C. use a commercial slimming program.
- D. follow a low-carbohydrate, high-fat diet.

Question 14

To maintain a healthy gut, individuals need to eat foods that are high in different types of fibre.

The best selection of foods to eat in order to maintain a healthy gut is

- A. broccoli, peas and kale.
- B. onions, leeks and garlic.
- C. onions, barley and legumes.
- D. milk, brown rice and quinoa.

Question 15

More-accurate or clear 'country of origin' food labelling regulations were introduced in order to

- A. let consumers make more-informed decisions.
- B. help consumers ensure the foods they purchase do not contain any allergens.
- C. help consumers purchase foods that provide them with the best value for money.
- D. assure consumers that foods produced overseas are not contaminated by chemicals that are not approved in Australia.

SECTION B

Instructions for Section B
Answer **all** questions in the spaces provided.

Question 1 (6 marks)

A report by the Australian Institute of Health and Welfare states that up to half of all food produced worldwide is wasted.

- a.** Describe the environmental effects of food wastage. 2 marks

- b.** All activities within the food system contribute to food wastage, including:

- primary production, including farming
- processing and manufacturing
- retailing
- household and consumer behaviour.

Select two activities from the list above and, for each activity, explain one way in which food wastage could occur as a result of this activity. 4 marks

Activity 1 _____

Explanation _____

Activity 2 _____

Explanation _____

Question 2 (7 marks)

- a. Describe the chemical digestion of protein in each of the two digestive organs listed in the table below.

4 marks

Digestive organ	Chemical digestion of protein
stomach	
small intestine	

- b. Adolescent females aged 14–18 years require 2½ serves of lean meat and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans per day, while females aged 2–3 years require only one serve per day.

Explain the biological reasons for the difference in this dietary requirement.

3 marks

Question 3 (6 marks)**Record of practical activity – Toasting white bread and fruit bread****Background information**

Ingredients listed in white bread	Ingredients listed in fruit bread
wheat flour, water, baker's yeast, vinegar, iodised salt, canola oil, wheat gluten, soy flour, emulsifiers, vitamins (thiamin, folate)	wheat flour, mixed fruit (25%), water, baker's yeast, wheat gluten, vegetable oil, sugar, mixed spice, iodised salt, vinegar, canola oil, soy flour, emulsifiers, vitamins (thiamin, folic acid)

Method

1. Cook one slice of white bread in a toaster for 120 seconds.
2. Cook one slice of fruit bread in a toaster for 120 seconds.

Results of practical activity

Photograph A	Photograph B
	
white bread toasted for 120 seconds	fruit bread toasted for 120 seconds

- a. In the table below, identify two chemical reactions that can cause browning when both white bread and fruit bread are toasted, and outline why each reaction occurs. 4 marks

Chemical reaction	Why the reaction occurs

- b. Explain why the toasted fruit bread is darker in colour than the toasted white bread. 2 marks

Question 4 (11 marks)

According to Nielsen Homescan survey data, sales of Asian green vegetables, such as pak choy, bok choy, Chinese cabbage and Chinese broccoli, increased by 22% over a 12-month period in Australia.

These figures demonstrate changes in the patterns of food purchasing and consumption behaviour of Australian consumers.

- a. Describe two reasons that could explain the increase in sales of Asian green vegetables in Australia. 4 marks

1. _____

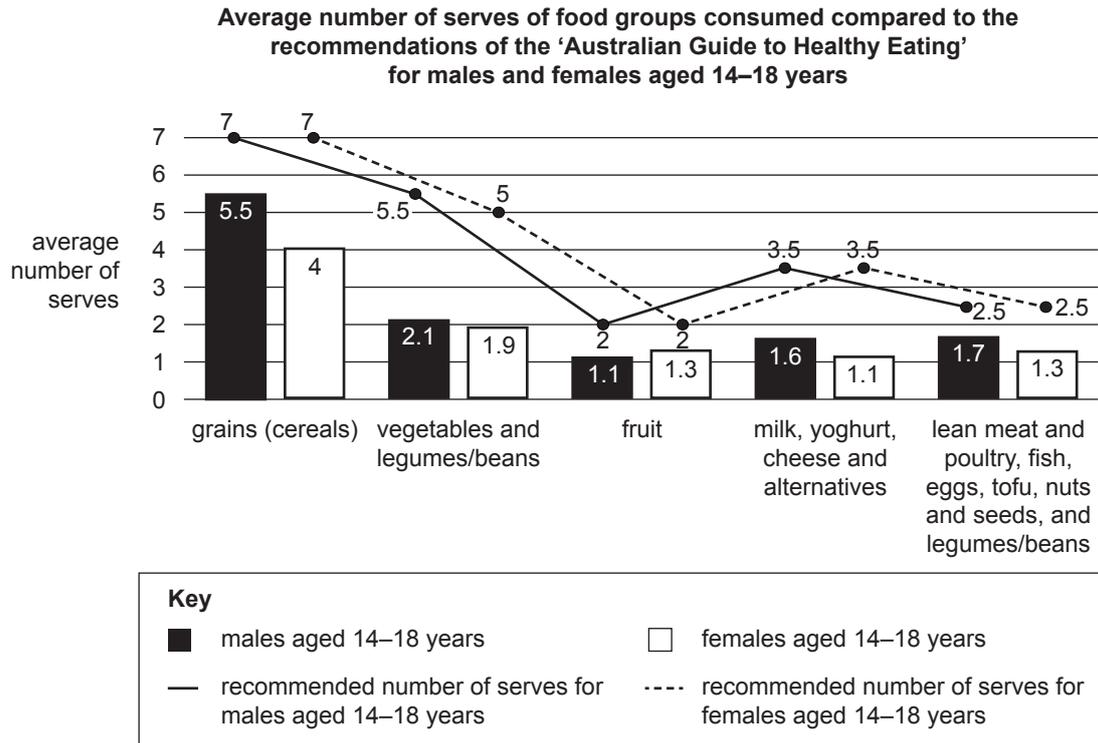
2. _____

- b. Use the recommendations of the *Australian Dietary Guidelines* (part of the 'Eat for Health' program) to explain why vegetables other than Asian green vegetables should also be consumed as part of a healthy diet. 3 marks

- c. Explain **two** reasons why eating the recommended number of serves of vegetables, as stated in the *Australian Dietary Guidelines*, can assist in enhancing good health and preventing obesity and related lifestyle diseases.

4 marks

Question 5 (10 marks)



Data: Australian Bureau of Statistics, *Australian Health Survey: Consumption of food groups from the Australian Dietary Guidelines, 2011–12*, ABS, cat. no. 4364.0.55.012; © Commonwealth of Australia 2016

- a. Refer to the graph above. Overall, which group – males or females – was closest to meeting the recommended number of serves of the food groups shown in the graph? Justify your response.

3 marks

Question 6 (9 marks)

- a. Ensuring a secure food supply is a major concern for many people throughout the world, including people in Australia.

Explain the concept of global food security.

2 marks

- b. Identify a type of technology and describe how this type of technology could be used to improve food production capacity in Australia as a contribution towards global food security.

3 marks

Question 7 (5 marks)

Nutrition content claims and health claims are made by food manufacturers, both on food packaging and in advertisements. Food Standards Australia and New Zealand (FSANZ) is the authority that determines the regulations for nutrition content claims and health claims.

- a. What is a nutrition content claim? 1 mark

- b. Identify the two levels of health claims. 2 marks

1. _____

2. _____

- c. Outline two of the key elements required for a food manufacturer to be able to make a health claim on a food product. 2 marks

1. _____

2. _____

- b. One method of farming that could be used to grow tomatoes is low-impact farming.

Discuss one challenge and one advantage of low-impact farming.

4 marks

Challenge _____

Advantage _____

Question 10 (6 marks)

- a. There are many social factors that influence not only the food people have access to but also the food people choose to eat.

Select one social factor from the list below and describe how this social factor could influence a family's food choices:

- education
- available time
- accommodation

3 marks

Social factor _____

- b. Explain how food can enable the expression of connectedness within families and communities.

3 marks
