Cambridge Assessment International Education

# Cambridge International A Level

**FOOD STUDIES** **9336/01**

Paper 1 Theory **October/November 2020**

**3 hours**

*3198036176*

You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

**INSTRUCTIONS**

- Answer **four** questions in total:
  Section A: answer **two** questions.
  Section B: answer **two** questions.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.

**INFORMATION**

- The total mark for this paper is 100.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **8** pages. Blank pages are indicated.

## Section A

Answer **two** questions.

**1** **(a)** Describe the difference in the composition of monosaccharides, polysaccharides and non-starch polysaccharides. Refer to their chemical structures and any nutritional benefits they provide. [12]

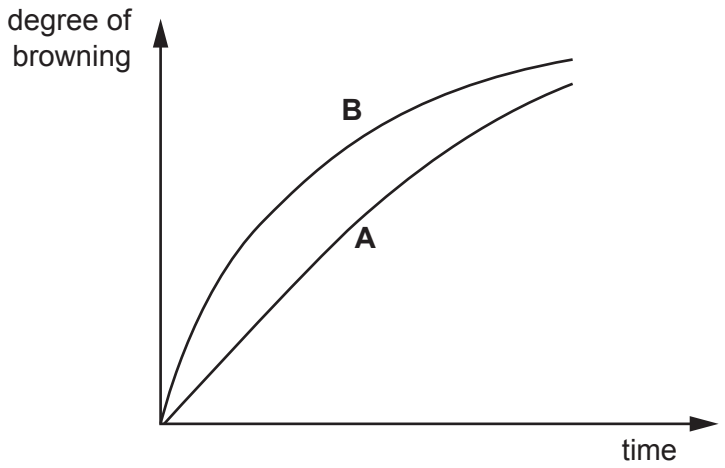
**(b)** Explain the role of salivary amylase in the mouth. Discuss the factors that affect the activity of this enzyme. [3]

**(c)** **(i)** Explain the term *unavailable carbohydrate*. Give an example. [3]

**(ii)** Explain the term *non-milk extrinsic sugars*. Give an example. [3]

**(iii)** Explain the function of the reducing sugar in the Maillard reaction. Give an example of a reducing sugar. [3]

**(d)** The conditions used during the Maillard reaction affect the rate of browning. State how the conditions should be changed in order to obtain graph **B** rather than graph **A**. [1]




[Total: 25]

**2** **(a)** Name the defective absorption disease that causes a build-up of thick mucus in the lungs and intestines. Explain how this disease causes defective absorption. [5]

**(b)** **(i)** Milk is a source of iodide. Give **two** other good sources of iodide. [1]

**(ii)** Describe the effects on the body of a deficiency and an excess of iodide. [4]

**(c)** **(i)** Define the term *basal metabolic rate*. [1]

**(ii)** Explain the term *thermogenesis* in relation to basal metabolic rate. [3]

**(d)** State the Reference Daily Intake (RDI) for men and women for:

**(i)** saturated fat [2]

**(ii)** water. [1]

**(e)** Outline the different factors affecting the dietary needs of primary school children. [8]

[Total: 25]

**3** **(a)** Describe the chemical structure of a triglyceride. Include a diagram. [4]

**(b)** **(i)** Suggest a **different** fat or oil that is suitable to use when making each of the following food products:

- deep-fried potatoes
- salad dressing
- flaky pastry
- Victoria sandwich cake. [2]

**(ii)** Explain your choice of fat in **(b)(i)** for the deep-fried potatoes. [2]

**(c)** Compare and contrast the processes of hydrolytic and oxidative rancidity in lipids. [7]

**(d)** Explain the terms *kilocalories* (kcal) and *kilojoules* (kJ). [3]

**(e)** Both simple carbohydrates and complex carbohydrates are hydrolysed to the same monosaccharides; however, complex carbohydrates are considered to be more healthy. Explain why. [7]

[Total: 25]

**4** **(a)** **(i)** Explain the role of collagen in the body. [2]

**(ii)** Describe the structure of collagen. [4]

**(b)** The table shows the simple classification of proteins. Suggest the type of protein, solubility or source for labels **(i)** to **(iii)**.

| **type** | **solubility** | **example/source** |
|---|---|---|
| **(i)** | insoluble | collagen |
| globular | **(ii)** | **(iii)** |

[3]

**(c)** Milk is an oil-in-water emulsion. Give **one** other example of an oil-in-water emulsion. [1]

**(d)** **(i)** Vitamin D is found in milk. Describe the functions of vitamin D in the body. [3]

**(ii)** State the scientific name for the type of vitamin D that is found in milk. [1]

**(iii)** Iodide is a mineral found in milk. Name **four** other minerals found in milk. [2]

**(iv)** Describe the functions in the body of **one** of the minerals given in your answer in **(d)(iii)**. [3]

**(e)** Describe the formation and storage of glycogen in the body. [6]

[Total: 25]

## Section B

Answer **two** questions.

**5** **(a)** Name and describe the process of turning pork into bacon. [5]

**(b)** Bacon is often preserved by vacuum packaging. Describe this method of packaging and name **one** other food that is packaged in this way. [3]

**(c)** Describe the production of the following foods:

**(i)** lard [5]

**(ii)** white vegetable fat. [3]

**(d)** Give the recipe and method for how to make hot-water crust pastry. [5]

**(e)** Give **four** reasons for cooking foods. [4]

[Total: 25]

**6** **(a)** Evaluate the impact of fair-trade practices on the lives of farmers and workers in developing nations. [6]

**(b)** **(i)** Describe the process of refining vegetable oils from seeds. [4]

**(ii)** Suggest reasons why some vegetable oils are more expensive to produce than others. [3]

**(c)** Explain the term *self-sufficiency*. Outline the advantages and disadvantages of being self-sufficient. [5]

**(d)** Irradiation is a food preservation technique.

**(i)** Describe this method of food preservation. [5]

**(ii)** Suggest why consumers may have concerns regarding the use of irradiation. [2]

[Total: 25]

**7** **(a)** Describe the effects of moist and dry heat on sugars and starches. [9]

**(b)** Explain how heat is transferred to meat when cooked on a grill. [4]

**(c)** Explain the term *homogenisation* with reference to milk production. [4]

**(d)** Describe the method for making hollandaise sauce. List the ingredients needed. [4]

**(e)** Explain how the presentation of food can have an impact on the consumer. [4]

[Total: 25]

**8** **(a)** With reference to microorganisms, explain how food spoilage occurs. [6]

**(b)** State **two** sources and **two** symptoms of food poisoning by *Campylobacter*. [2]

**(c)** Describe how good personal hygiene can help to prevent the spread of microorganisms. [6]

**(d)** Give **one** advantage and **one** disadvantage of cooking with each of the following types of saucepans:

- aluminium
- stainless steel
- enamelled steel.

[6]

**(e)** The ingredients for a packet of chocolate-flavour dessert mix include the additives aspartame, caramel and propylene glycol monostearate. Describe a different reason for the use of each of these additives. [3]

**(f)** Give **one** reason to include each of the following pieces of labelling information:

**(i)** bar code [1]

**(ii)** weight. [1]

[Total: 25]

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