
FOOD STUDIES

9336/01

Paper 1

October/November 2016

3 hours

Additional Materials: Answer Booklet/Paper

READ THESE INSTRUCTIONS FIRST

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

You may use an HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue or correction fluid.

DO NOT WRITE IN ANY BARCODES.

Answer **four** questions, **two** from Section A and **two** from Section B.

Write your answers on the separate Answer Booklet/Paper provided.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **3** printed pages and **1** blank page.

Section A

Answer **two** questions.

- 1 (a) State the functions of calcium, phosphorous and iodine in the body. [6]
- (b) Explain the main roles of the trace elements cobalt, copper, manganese and zinc. [8]
- (c) Identify locally available food sources of each of cobalt, copper, manganese and zinc. [2]
- (d) State the vitamin content of milk and explain why the vitamins available in milk may not be available when consumed. [4]
- (e) Explain the importance of non-starch polysaccharide (NSP) / dietary fibre in a healthy diet. [5]
- 2 (a) State the energy value of 1g of protein. [1]
- (b) Describe the primary and secondary structures of protein. [6]
- (c) Give an example of a globular protein. With the aid of a diagram, explain the characteristics and properties of globular proteins. [5]
- (d) Explain the terms *protein quality* and *complementary proteins*. [6]
- (e) Describe the effects of cooking on fish. [5]
- (f) Describe the deficiency disease kwashiorkor. [2]
- 3 (a) (i) Describe the chemical structure of lactose. [3]
- (ii) With reference to lactose, explain the terms *enzymic hydrolysis* and *defective absorption (malabsorption)*. [6]
- (b) Give an account of:
- (i) the role of high-density lipoproteins and low-density lipoproteins in the body; [3]
- (ii) the structure and function of intestinal villi; [5]
- (iii) the digestion of carbohydrates; [4]
- (iv) transamination. [4]
- 4 (a) Explain how:
- (i) the body uses energy; [4]
- (ii) energy is stored in the body; [4]
- (iii) Maillard browning occurs; [5]
- (iv) enzymic browning occurs. [3]
- (b) Discuss the specific nutritional needs of adolescents. [9]

Section B

Answer **two** questions.

- 5 (a) (i) Discuss why milk requires heat treatment. [2]
(ii) Name and describe **three** methods of heat treating milk. [9]
- (b) Describe the production of a hard cheese such as cheddar. [7]
- (c) Explain the uses of additives in the production of fruit yoghurt. [7]
- 6 (a) Pancakes are made from a pouring batter. Give the recipe and method for making a batch of pancakes. [4]
- (b) Give an example of a yeast product that can be baked at home. Explain how yeast works as a raising agent. [6]
- (c) Give advice on choosing and storing fresh fish. [7]
- (d) Explain how to achieve an efficient and safe working environment when planning a kitchen for the home. [8]
- 7 (a) Explain how *Clostridium botulinum* could contaminate canned tomatoes. [3]
- (b) Explain why dehydration, freezing and addition of antioxidants are used as methods of food preservation. [6]
- (c) Some foods contain naturally occurring toxins. Give **two** examples of such foods and explain how these foods should be prepared to avoid food poisoning. [4]
- (d) Discuss how good kitchen and personal hygiene can reduce the incidence of food poisoning. [12]
- 8 (a) Give advice on the choice of locally available nutritious foods for a family on a small budget. [9]
- (b) Give advice on choosing a domestic refrigerator. [8]
- (c) Give advice on the use of a microwave oven. [8]

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