

General Certificate of Education
June 2007
Advanced Subsidiary Examination



DESIGN AND TECHNOLOGY: FOOD TECHNOLOGY FTY1
Unit 1 Materials and Components

Friday 8 June 2007 9.00 am to 10.30 am

For this paper you must have:

- a lined 8-page answer book (AB08) which is provided separately
- normal writing and drawing instruments.

Time allowed: 1 hour 30 minutes

Instructions

- Use blue or black ink or ball-point pen. Use pencil and coloured pencils only for drawing.
- Write the information required on the front of your answer book. The *Examining Body* for this paper is AQA. The *Paper Reference* is FTY1.
- Answer **three** questions.
Answer Question 1 and **two** other questions.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 100.
Four of these marks will be awarded for using good English, organising information clearly and using specialist vocabulary where appropriate.
- There are 40 marks for Question 1, and 28 marks for each of Questions 2 to 4.

Advice

- Illustrate your answers with sketches and/or diagrams wherever you feel it is appropriate.

Answer Question 1 and **two** other questions.

SECTION A

You **must** answer this question.

1 (a) Describe the effects of heat on

(i) starch,

(3 marks)

(ii) sugar.

(3 marks)

(b) Explain the importance of **each** of the following in food production.

(i) shortening

(3 marks)

(ii) aeration

(3 marks)

(iii) dextrinisation

(3 marks)

(c) With reference to specific ingredients, describe **two** food products that could be developed rich in the B-Vitamins and Iron.

(5 marks)

(d) Explain the differences in the composition of 100 g of the different cheeses listed in the table below.

	Protein (g)	Fat (g)	Calcium (mg)	Iron (mg)	Sodium (mg)
Cheddar Cheese	26	33.5	800	0.5	600
Brie	19.3	26.9	540	0.8	1300
Stilton	22.7	35.5	320	0.3	1300
Cottage Cheese	15	0.6	60	0.1	400
Cream Cheese	4	48	100	0.1	250

(10 marks)

(e) Discuss, with specific examples, why cheese would be a suitable ingredient when producing a range of food products for special occasions.

(10 marks)

SECTION B

Answer **two** questions from this section.

- 2 (a) Explain the importance of soluble **and** insoluble Non Starch Polysaccharides (NSPs) in the diet. *(4 marks)*
- (b) Using examples, explain how a food manufacturer could develop a range of **either** savoury **or** sweet products high in NSP. *(10 marks)*
- (c) (i) Name **two** sources of Vitamin A. *(2 marks)*
- (ii) Name **two** sources of Vitamin C. *(2 marks)*
- (d) Discuss the effect of food processing on vitamins. Make reference to specific food products in your answer. *(10 marks)*

3 Ingredients for Shortbread biscuits

125 g Plain Flour
25 g Cornflour
50 g Caster Sugar
100 g Butter/Margarine

- (a) Explain the functions of each of the ingredients in the recipe for Shortbread biscuits. *(4 × 2 marks)*
- (b) Describe how a food manufacturer could develop the flavour, texture **and** nutritional value of Shortbread biscuits to produce a product range. *(10 marks)*
- (c) Explain why a food manufacturer may be reluctant to use artificial sweeteners in the production of baked food products. *(6 marks)*
- (d) Describe **four** finishing techniques that could be applied to the Shortbread biscuits to make them more appealing. *(4 marks)*

Turn over for the next question

Turn over ▶

- 4 (a) Explain the *disadvantages* of using standard pre-manufactured food components in a product range. (10 marks)
- (b) (i) Describe the effects of moist heat on rice. (4 marks)
- (ii) Explain why rice is a high risk food. (4 marks)
- (c) Describe, giving examples, why a food manufacturer may use additives to colour, flavour and increase the nutritional content of food products. (10 marks)

END OF QUESTIONS