

General Certificate of Education  
January 2008  
Advanced Subsidiary Examination



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

Wednesday 9 January 2008 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 any **two** of Questions 2 to 4.

**Information**

- 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 each for Questions 2, 3 and 4.
- The marks for questions are shown in brackets.

**Advice**

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

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

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**SECTION A**

You **must** answer this question.

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- 1 (a) Describe the effects of heat on eggs. *(6 marks)*
- (b) Explain **each** of the following terms used 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 to be rich in **both** vitamin D and calcium. *(5 marks)*
- (d) Explain the differences in the composition of 100 g of the different foods listed in the table below.

<b>per 100 g</b>	<b>protein (g)</b>	<b>fat (g)</b>	<b>calcium (mg)</b>	<b>iron (mg)</b>	<b>sodium (mg)</b>
Flakes of Corn (enriched)	8.6	0.5	0	6.7	1160
Muesli	12.9	7.5	200	4.6	180
White bread	7.8	1.7	105	1.6	540
Wholemeal bread	9.0	2.5	25	2.7	540

*(12 marks)*

- (e) Discuss, with specific examples, why cheese would be a suitable ingredient when producing a range of food products for special occasions. *(8 marks)*

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**SECTION B**

Answer **two** questions from this section.

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- 2 (a) Name **three** different types of rice and compare their nutritional properties. *(3 × 3 marks)*
- (b) Explain how a research and development team could modify the nutritional value, flavour **and** texture of a product range based on pasta. *(12 marks)*
- (c) Describe the effects of cooking with moist heat on rice **or** pasta. *(4 marks)*
- (d) Explain why cooked rice is a high risk food. *(3 marks)*
- 3 (a) Describe the effects of heat on fats and oils. *(6 marks)*
- (b) Explain why a food manufacturer would use soya when designing food for a school canteen. *(8 marks)*
- (c) (i) Name **two** water soluble micro-nutrients. *(2 marks)*
- (ii) Name **two** macro-nutrients. *(2 marks)*
- (d) Discuss the effect of food processing on micro-nutrients. Make reference to specific food products in your answer. *(10 marks)*

**Turn over for the next question**

**Turn over ▶**

- 4 (a) Name **six** different rich sources of Non Starch Polysaccharide (NSP) in the diet. *(6 marks)*
- (b) Describe the functions and importance of Non Starch Polysaccharide in the diet. *(10 marks)*
- (c) Explain how a research and development team could increase the Non Starch Polysaccharide content of biscuits. *(12 marks)*

**END OF QUESTIONS**