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Centre number

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Candidate number

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# AS

# DESIGN AND TECHNOLOGY: FOOD TECHNOLOGY

## Unit 1 Materials, Components and Application

Monday 23 May 2016

Morning

Time allowed: 2 hours

### Materials

For this paper you must have:

- normal writing and drawing instruments.

### Instructions

- Use black ink or black ball-point pen. Use pencil for drawing only.
- Fill in the boxes at the top of this page.
- Answer **all** questions in Section A.
- Answer **one** question from Section B, **either** Question 9 **or** Question 10.
- Answer the question in Section C.
- You must answer the questions in the spaces provided. Do not write outside the box around each page.
- Do all rough work in this book. Cross through any work you do not want to be marked.

### Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 80.
- There are 20 marks for Section A, 20 marks for Section B and 40 marks for Section C.

### Advice

- Illustrate your answers with sketches and/or diagrams wherever you feel it is appropriate.
- You are advised to spend approximately 30 minutes on Section A, 30 minutes on Section B and one hour on Section C.



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HB/210447/Jun16/E3

# FOOD1

**Section A**

Answer **all** the questions in this section.

**1** Name **two** key food sources of phosphorus. **[2 marks]**

1 \_\_\_\_\_  
2 \_\_\_\_\_

2

**2** Give **two** effects of a deficiency of fats and oils in the diet. **[2 marks]**

1 \_\_\_\_\_  
\_\_\_\_\_  
2 \_\_\_\_\_  
\_\_\_\_\_

2

**3** State **one** function of water in the diet and how much we are advised to consume daily. **[2 marks]**

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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2



4 Define the term 'thermogenesis'.

[2 marks]

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2

5 Which **two** nutrients interact in the production of human energy?

[2 marks]

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2

6 Explain **two** different roles of retinol in the diet.

[2 marks]

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2

Turn over for the next question

Turn over ►



7 Describe **two** health symptoms that would result from deficiency of Vitamin B12 in the diet, and give **two** food sources that could be eaten to avoid this deficiency. **[4 marks]**

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4

8 Explain why colourings are used in many processed food products.  
Give examples to support your answer. **[4 marks]**

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4



**Turn over for the next question**

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ANSWER IN THE SPACES PROVIDED**

**Turn over ►**



0 5

**Section B**

Answer **either** Question 9 **or** Question 10

**9 (a)** Research has shown that British families throw away on average the equivalent of six meals per week in food waste.

What can consumers do to help reduce this amount of food waste?

**[10 marks]**

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**Section C**

Answer this question.

**11 (a)** Describe how one **or** more dessert products could be developed to:

- reduce the saturated fat content **[5 marks]**
- reduce the sugar content **[5 marks]**
- increase the soluble NSP (non-starch polysaccharide) content **[5 marks]**
- improve the taste. **[5 marks]**

You may use annotated sketches to illustrate your answer, but these are not essential.



**Question 11 continues on the next page**

**Turn over ►**









**11 (c) (i)** Outline **four** different factors that affect the growth of bacteria in food products.

**[4 marks]**

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**11 (c) (ii)** What checks could a food technologist put in place to help reduce the risk of bacterial contamination and growth in food production?

Give examples to illustrate your answer.

**[6 marks]**

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**END OF QUESTIONS**



**There are no questions printed on this page**

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ANSWER IN THE SPACES PROVIDED**

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