



GCE AS/A level

1111/02

**DESIGN AND TECHNOLOGY
FOOD TECHNOLOGY DT1**

P.M. WEDNESDAY, 18 May 2011

2 hours

ADDITIONAL MATERIALS

In addition to this examination paper, you will need a 12 page answer book.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Answer **five** questions from Section A.

Answer **one** question from Section B.

INFORMATION FOR CANDIDATES

When and where appropriate, answers should be amplified and illustrated with sketches and/or diagrams.

Section A is designed to demonstrate your **breadth** of knowledge in Food Technology.

Your **Section B** answer should be substantial and demonstrate your **depth** of knowledge in Food Technology.

You are reminded that assessment will take into account the quality of written communication used in answers that involve extended writing (**Section B**).

SECTION A

*Answer **five** questions from this section.*

*This section is designed to demonstrate your **breadth** of knowledge in Food Technology.*

Each question carries 8 marks.

1. (a) Explain the difference between *qualitative* and *quantitative* performance criteria when drawing up a design specification. [4]
 (b) For a named food product, state **two** examples of *qualitative* performance criteria and **two** examples of *quantitative* performance criteria. $2 \times [2]$

2. Outline the influence of current dietary guidelines on the design of food products. [8]

3. *Gantt* charts and *Flow* charts are effective project management systems used by designers and manufacturers.
 (a) Describe the main features of **both** project management systems. $2 \times [2]$
 (b) Explain how they are effectively used in project management. [4]

4. Most cake products contain sugar, fat, eggs and flour in varying proportions.
 Explain how these food materials could be manipulated and combined in varying proportions to alter:
 (a) the texture of a cake product; [4]
 (b) the shelf-life of a cake product. [4]

5. Describe the features and benefits of the following *Intellectual Property Rights* with reference to specific food products within **each**:
 (a) patents; [4]
 (b) trade marks. [4]

6. (a) Describe **two** advantages to the manufacturer of using standardised food components. $2 \times [2]$
- (b) Describe **two** disadvantages to the manufacturer of using standardised food components. $2 \times [2]$
7. Seasonality within the food industry is becoming a thing of the past.
Outline **four** issues involved with consumers demanding all foods throughout the year. $4 \times [2]$
8. Explain how the properties and functions of **one** specific food packaging material make it suitable for packaging named food products. [8]

SECTION B

*Answer **one** question from this section.*

*Your answer should be substantial and show the **depth** of your knowledge in Food Technology.*

Each question carries 30 marks.

- 9.** *Successful food technologists create products using their understanding of technology, production methods and market needs.*

Discuss the validity of this statement in relation to a specific food product or range of food products. [30]

- 10.** Explain the procedures food manufacturers use to create an efficient and economical production line. [30]

- 11.** When designing food products, food technologists consider the implications of:

- (a) materials selection;
- (b) waste disposal.

Discuss the importance of these areas in relation to designing food products. [30]