



GCE A level

1113/02



S15-1113-02

DESIGN AND TECHNOLOGY – DT3

Food Technology

A.M. MONDAY, 8 June 2015

2 hours 30 minutes

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 **three** questions from Section A.

Answer **three** questions from Section B.

Answer **two** questions from Section C.

INFORMATION FOR CANDIDATES

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

Section A and **Section B** answers are designed to demonstrate your **breadth** of knowledge in Food Technology.

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

Candidates are reminded of the necessity for good English and orderly presentation in their answers.

SECTION A

Answer **three** questions from this section.

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

Each question carries 8 marks.

1. Retailers sell products which are designed for consumers with food intolerances.
For a named food intolerance:
 - (a) outline the symptoms; [2]
 - (b) describe how different food products have been adapted to meet the needs of consumers with this intolerance. [6]

2. Explain what you understand by the term Computer Integrated Manufacturing (CIM) as a system used in volume food production. [8]

3. Name a food product which has been subjected to incremental improvements over time and explain the reasons for **two** of these improvements. $2 \times [4]$

4. Give reasons why an understanding of the product life cycle is so important when deciding on strategies to sell a food product. [8]

5.
 - (a) Outline briefly **two** factors affecting the growth of bacteria. $2 \times [2]$
 - (b) For any **one** of these factors, explain how the growth of bacteria is controlled within a named method of food preservation. [4]

SECTION B

Answer **three** questions from this section.

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

Each question carries 8 marks.

6. Evaluate the effect of market research in ensuring the success of food products that enter the market place. [8]
7. (a) Outline the functions of protein in the diet. [2]
(b) Using examples of named foods, explain in detail the meaning of the term 'biological value' and discuss its importance in diet planning. [6]
8. Explain how prototyping and trialling are used within the development of new food products. [8]
9. Describe the essential features of:
(a) registered design; [4]
(b) registered trade mark. [4]
10. (a) Describe the use of **two** named items of industrial equipment used within the large-scale manufacture of food products. $2 \times [2]$
(b) Describe the benefits of using these items of equipment to manufacture food products. [4]

SECTION C

Answer two questions from this section.

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

Each question carries 26 marks.

- 11.** Discuss in detail how named food materials can be manipulated and combined in order to enhance named food products. [26]
- 12.** Food related health issues are increasingly becoming a major concern.
Discuss the impact of poor diet on health and describe how food products have been adapted to address these issues. [26]
- 13.** Evaluate the importance of food packaging to the manufacturer, retailer and consumer and discuss to what extent packaging can enhance a food product. [26]
- 14.** Explain the purpose of design specifications and manufacturing specifications when developing and producing food products. [26]
- 15.** Evaluate the part that quality assurance and quality control have played in high volume food manufacturing. [26]

END OF PAPER