

Write your name here

Surname

Other names

Pearson
Edexcel GCE

Centre Number

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Candidate Number

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Design and Technology

Food Technology

Advanced

Unit 3: Food Products, Nutrition and Product Development

Friday 9 June 2017 – Morning

Time: 2 hours

Paper Reference

6FT03/01

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 70.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
– *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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Pearson

Answer ALL questions. Write your answers in the spaces provided.

1 Macro and micro nutrients make an important contribution to the diet.

(a) Identify **one** nutritional function of protein.

(1)

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(b) (i) Identify **three** nutritional functions of calcium.

(3)

1

2

3

(ii) State **one** medical condition that would result from a deficiency of calcium.

(1)

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(c) Describe the effects that a deficiency of ascorbic acid (vitamin C) would have on the body.

(3)

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(Total for Question 1 = 8 marks)



2 Outline the following processes involved in food manufacturing:

(a) the malting process in beer making

(6)

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(b) the fermentation process in pickling.

(6)

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(Total for Question 2 = 12 marks)



3 (a) State **three** factors that affect an individual's energy requirements.

(3)

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2

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3

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(b) Explain, with reference to energy balance, how an individual who is obese can reduce their body mass index (BMI).

(2)

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(c) Evaluate the use of Dietary Reference Values (DRVs) by health professionals when assessing diets.

(5)

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(Total for Question 3 = 10 marks)



4 (a) Compare and contrast the production of evaporated milk with that of condensed milk.

(4)

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(b) Describe the process of drying milk.

(2)

(c) Discuss the effects of the drying process on the quality of milk.

(4)

(Total for Question 4 = 10 marks)

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5 (a) Discuss the factors that affect fish quality at the following stages:

(i) prior to catch

(3)

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(ii) during chilled storage.

(3)

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(b) Explain the nutritional contribution to the diet of the following nutrients found in oily fish:

(i) vitamin A

(2)

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(ii) vitamin D

(2)

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(iii) omega 3 polyunsaturated fatty acid.

(2)

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(Total for Question 5 = 12 marks)

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*6 Discuss the influences cultural changes have had on food product development and innovation.

(8)

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(Total for Question 6 = 8 marks)



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*7 Explain why modified starch is useful to food manufacturers.

(10)

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(Total for Question 7 = 10 marks)

TOTAL FOR PAPER = 70 MARKS



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