Please write clearly in block capitals.

Centre number: ______________________  Candidate number: ______________________
Surname: ____________________________
Forename(s): __________________________
Candidate signature: __________________________

GCSE
FOOD PREPARATION AND NUTRITION

Paper 1 Food Preparation and Nutrition

Thursday 14 June 2018  Afternoon  Time allowed: 1 hour 45 minutes

Materials
For this paper you must have:
• a black pen
• a pencil.

Instructions
• Use black ink or black ball-point pen.
• Fill in the boxes at the top of this page.
• Answer all questions.
• You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
• Do all rough work in this answer 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 100.
• You are reminded of the need for good English and clear presentation in your answers.
Section A consists of multiple choice questions.

Answer all questions in this section.
There are 20 marks available.

Only one answer per question is allowed.

For each answer completely fill in the circle alongside the appropriate answer.

For each question you should shade in one box.
An example is shown below.

Which food is high in protein?

A cabbage
B cheese
C oranges
D cucumber

Which one of the following is a micronutrient?

A carbohydrate
B fat
C protein
D vitamin
Coeliac disease is an intolerance to

A eggs
B meat
C milk
D wheat

Anaemia is caused by a diet deficient in which mineral?

A calcium
B iodine
C iron
D sodium

The percentage of recommended energy from carbohydrates per day is

A 15%
B 35%
C 50%
D 75%

Question 1 continues on the next page
01.05 Which one of the following shows the danger zone temperatures?

[1 mark]

A 0 °C to 35 °C
B 3 °C to 63 °C
C 4 °C to 75 °C
D 5 °C to 63 °C

01.06 Which one of the following is the correct storage condition for bananas?

[1 mark]

A at room temperature
B in the chill cabinet
C in the freezer
D in the refrigerator

01.07 Which of the following methods of cooking are all water based?

[1 mark]

A steaming, grilling, poaching
B boiling, frying, simmering
C baking, roasting, grilling
D simmering, boiling, poaching

Do not write outside the box.
Which one of the following is an example of bacterial contamination? [1 mark]

A. a food worker sneezing when preparing food
B. a fish bone in a fishcake
C. cleaning agents left on a work surface
D. a piece of plastic in a cake mixture

Convection is the transfer of heat energy through [1 mark]

A. direct heat rays
B. liquids
C. metals
D. solids

Which one of the following are water soluble vitamins? [1 mark]

A. vitamins A and C
B. vitamins B and C
C. vitamins B and D
D. vitamins C and D

Question 1 continues on the next page
When heated, the colour of sugar changes from white to brown. This process is called

A caramelisation
B enzymic browning
C gelatinisation
D oxidation

Which vitamin helps the body absorb calcium?

A vitamin A
B vitamin B
C vitamin C
D vitamin D

Which one of the following is an example of a primary processed food?

A bananas
B eggs
C flour
D tomatoes
Which one of the following can be an example of a free range food? [1 mark]

A bananas
B eggs
C flour
D tomatoes

Identify one food that has an extraction rate during production [1 mark]

A bananas
B eggs
C flour
D tomatoes

Which fruit is affected by enzymic browning? [1 mark]

A apples
B grapes
C oranges
D raspberries

Question 1 continues on the next page
01.17 Which one of the following describes the distance food is transported from producer to consumer?

A air miles
B carbon footprint
C fair trade
D food miles

01.18 Which of the vitamins listed below is an antioxidant?

A vitamin A
B vitamin B
C vitamin D
D vitamin K

01.19 Which one of the following is not a legal requirement for food labelling?

A cooking instructions
B list of ingredients
C serving suggestions
D weight
What is added to foods when fortification takes place?

A additives  
B emulsifiers  
C nutrients  
D preservatives

[1 mark]
Section B

Answer all questions in this section.
There are 80 marks available.

Question 2 is about food safety.

02.1 Give four personal hygiene rules that must be followed by people serving food. [4 marks]

1

2

3

4
State **two** food safety rules that must be used for each of the following. Explain why each rule is needed.

**[8 marks]**

Storing fresh, cooked prawns.

<table>
<thead>
<tr>
<th>Food safety rule</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</tbody>
</table>

Reheating cooked chicken.

<table>
<thead>
<tr>
<th>Food safety rule</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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</tbody>
</table>
Question 3 is about nutrition, health and food science.

Information about two meals is given below. You should use this information when answering the question that follows.

Table 1

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>per portion</th>
<th>RI (Reference Intake)</th>
<th>per portion</th>
<th>RI (Reference Intake)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>408.0 kcal</td>
<td>20 %</td>
<td>668.0 kcal</td>
<td>33 %</td>
</tr>
<tr>
<td>Protein</td>
<td>31.0 g</td>
<td>68 %</td>
<td>26.0 g</td>
<td>58 %</td>
</tr>
<tr>
<td>Carbohydrate</td>
<td>48.0 g</td>
<td>21 %</td>
<td>54.0 g</td>
<td>24 %</td>
</tr>
<tr>
<td>Total Sugars</td>
<td>11.0 g</td>
<td>13 %</td>
<td>4.1 g</td>
<td>5 %</td>
</tr>
<tr>
<td>Fat</td>
<td>11.0 g</td>
<td>16 %</td>
<td>39.0 g</td>
<td>56 %</td>
</tr>
<tr>
<td>Saturated fat</td>
<td>4.0 g</td>
<td>20 %</td>
<td>22.0 g</td>
<td>110 %</td>
</tr>
<tr>
<td>Salt</td>
<td>0.5 g</td>
<td>9 %</td>
<td>2.0 g</td>
<td>33 %</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>1148.0 µg</td>
<td></td>
<td>398.0 µg</td>
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<tr>
<td>Vitamin B12</td>
<td>2.5 µg</td>
<td></td>
<td>1.6 µg</td>
<td></td>
</tr>
<tr>
<td>Vitamin C</td>
<td>64 mg</td>
<td></td>
<td>5.9 mg</td>
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<tr>
<td>Vitamin D</td>
<td>2.6 µg</td>
<td></td>
<td>0.9 µg</td>
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</tr>
<tr>
<td>Calcium</td>
<td>266.0 mg</td>
<td></td>
<td>27.0 mg</td>
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<tr>
<td>Iron</td>
<td>2.7 mg</td>
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<td>2.0 mg</td>
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</tbody>
</table>

With reference to the ingredients, nutrient content and reference intake for each of the dishes, assess the suitability of each meal for an elderly person.

Evaluate which meal is the healthier choice. Include justified reasons in your answer. [12 marks]
**03.2** Explain why dietary fibre is important in the body. Suggest ways the meat pie and roast potatoes can be modified to include more dietary fibre. [6 marks]

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**03.3** Explain the function of the following ingredients when making shortcrust pastry. [4 marks]

Plain flour
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

Fats
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
Question 4 is about food science.

04.1 Complete Table 2 below to match the sauce with the correct sauce making method. [3 marks]

<table>
<thead>
<tr>
<th>Type of sauce</th>
<th>Sauce making method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hollandaise sauce</td>
<td>Starch based</td>
</tr>
<tr>
<td>Roux/all in one sauce</td>
<td>Emulsion</td>
</tr>
<tr>
<td>Tomato pasta sauce</td>
<td>Reduction</td>
</tr>
</tbody>
</table>

04.2 Give three reasons why it is important to stir a flour based sauce. [3 marks]

__________________________________________________________________________________________________________

04.3 Explain how gelatinisation takes place when making a starch based sauce. [6 marks]

__________________________________________________________________________________________________________

__________________________________________________________________________________________________________

__________________________________________________________________________________________________________

__________________________________________________________________________________________________________

__________________________________________________________________________________________________________
Describe how the following raising agents work. Give an example of a recipe that uses each method.

Name a chemical raising agent

Describe how it works

Example of a recipe using this chemical raising agent

[4 marks]

Name a biological raising agent

Describe how it works

Example of a recipe using this biological raising agent

[4 marks]
Question 5 is about food choices.

Sales of organic food and drinks in the UK are growing.

Analyse and evaluate why an increasing number of consumers are choosing organic food and drinks.

[8 marks]

Question 5 continues on the next page
Explain the advantages and disadvantages of Genetically Modified (GM) foods. [6 marks]

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
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</tbody>
</table>
Question 6.1 is about food processing and production.

Table 3

<table>
<thead>
<tr>
<th>Heat treatment of milk</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasteurisation</td>
<td>heated at 72 °C for 15 seconds</td>
</tr>
<tr>
<td>Sterilisation</td>
<td>heated at 110–130 °C for 30 minutes</td>
</tr>
<tr>
<td>Ultra heat treated (UHT)</td>
<td>heated at 135 °C for 1 second</td>
</tr>
</tbody>
</table>

[6 marks]

Using Table 3 above, explain how the different heat treatment methods:

allow milk to last longer

affect the nutrition, taste and appearance of milk

Question 6 continues on the next page
Question 6.2 is about food additives.

Food additives are used in many processed foods. [6 marks]

Explain why additives are used in food processing.

Explain some of the concerns people have about their use.