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**FOOD STUDIES**

**9336/02**

Paper 2 Practical Test

**October/November 2018**

MARK SCHEME

Maximum Mark: 100

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**Published**

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2018 series for most Cambridge IGCSE™, Cambridge International A and AS Level components and some Cambridge O Level components.

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This document consists of **6** printed pages.

**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

**GENERIC MARKING PRINCIPLE 1:**

Marks must be awarded in line with:

the specific content of the mark scheme or the generic level descriptors for the question  
the specific skills defined in the mark scheme or in the generic level descriptors for the question  
the standard of response required by a candidate as exemplified by the standardisation scripts.

**GENERIC MARKING PRINCIPLE 2:**

Marks awarded are always **whole marks** (not half marks, or other fractions).

**GENERIC MARKING PRINCIPLE 3:**

Marks must be awarded **positively**:

marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate  
marks are awarded when candidates clearly demonstrate what they know and can do  
marks are not deducted for errors  
marks are not deducted for omissions  
answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

**GENERIC MARKING PRINCIPLE 4:**

Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

**GENERIC MARKING PRINCIPLE 6:**

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

| Question  | Answer   | Marks |
|-----------|--|-------|
| 1(a)      | dishes chosen – four dishes – suitability  | 4     |
|           | variety of skills chosen without repetition  | 4     |
| 1(b)      | choice of dish to show gelatinisation of starch  | 1     |
|           | degree of skill for starch dish  | 1     |
| 1(c)(i)   | <b>Name eight essential amino acids for adults</b><br><br>phenylalanine, valine, threonine, tryptophan, methionine, leucine, isoleucine, lysine  | 4     |
| 1(c)(ii)  | <b>Describe how a vegan can ensure a good supply of protein and iron</b><br><br><i>protein</i><br>vegans obtain HBV by complementation – two LBV proteins are eaten together so that IAA missing in one food is made up by the other e.g. lentil soup and bread, beans on toast – cereals lack lysine and pulses lack methionine;<br>eat soya – only plant source that contains all of EAAs – can eat soya as tofu / tempeh / soya milk / soya flour / TVP;<br><i>iron</i><br>eat pulses including chickpeas, lentils, kidney beans and tofu; sprouted beans and seeds such as aduki beans, alfalfa and sunflower seeds; cereals and products such as breakfast cereals and bread; green leafy vegetables including spinach, kale and cabbage and also broccoli; nuts e.g. almonds and cashews; dried fruit especially apricots, figs, dates and raisins; eat vitamin C which helps with absorption of iron and is present in citrus fruit and juices, sweet peppers, and tomatoes as well as broccoli and leafy greens; | 6     |
| 1(c)(iii) | include skills used – use of seasonal foods – ease of obtaining foods e.g. grow in garden at home – oven management – cost / in season – serving;  | 4     |
| 1(c)(iv)  | at least four nutrients and appropriate functions given  | 4     |

| Question | Answer  | Marks |
|----------|---|-------|
| 2(a)     | dishes chosen – four dishes – suitability   | 4     |
|          | variety of skills chosen without repetition   | 4     |
| 2(b)     | choice of dish to show gelatinisation of starch   | 1     |
|          | degree of skill for starch dish   | 1     |
| 2(c)(i)  | <p><b>State the nutritive value of two of the staple foods chosen</b></p> <p><b>Wheat</b> – niacin / B<sub>3</sub> – thiamine / B<sub>1</sub> – riboflavin / B<sub>2</sub> – vitamin E – iron – calcium – phosphorus – LBV protein – carbohydrate / starch – fat – zinc – selenium;</p> <p><b>Rice</b> – LBV protein – carbohydrate / starch – calcium – phosphorus – niacin / B<sub>3</sub> – vitamin E – brown more nutritious than white;</p> <p><b>Corn</b> – niacin / B<sub>3</sub> – thiamine / B<sub>1</sub> – riboflavin / B<sub>2</sub> – vitamin E – iron – phosphorus – LBV protein – carbohydrate / starch – fat – vitamin A – sodium;</p> <p><b>Potato</b> – carbohydrate / starch – potassium – zinc – vitamin C;</p> <p><b>Cassava</b> – carbohydrate / starch – potassium – vitamin C;</p> <p><b>Soya bean</b> – HBV protein – fat – carbohydrate / starch – calcium – iron – phosphorus – potassium – vitamin C – niacin / B<sub>3</sub> – thiamine / B<sub>1</sub> – riboflavin / B<sub>2</sub> – folate – vitamin A;</p> <p><b>Sorghum</b> – LBV protein – fat – carbohydrate / starch – calcium – iron – phosphorus – potassium – niacin / B<sub>3</sub>;</p>   | 4     |
| 2(c)(ii) | <p><b>State why staple foods are important and describe the different products that can be made from two different staple foods</b></p> <p>food is regularly consumed in a community or society from which people obtain most or a significant proportion of their calorie requirements – inexpensive – readily available – supply one or more of the three organic macronutrients needed for survival and health: carbohydrates, proteins, and fats – suitable for storage over long periods of time without decay – can be stored and used in periods of shortage;</p> <p>Rice can be made into noodles – flour – many different types – can be made into risottos – paella – puddings;</p> <p>Corn is used in a variety of ways – is a popular food staple;</p> <p>Dried, ground corn is called cornmeal – make porridge out of cornmeal, including polenta in Italy and sadza in Zimbabwe – cornmeal is also used to make cornbread / tortillas;</p> <p>Corn kernels can make grits – grits are a popular breakfast food, as are corn flakes and other cereals made from corn – can boil, grill, or roast whole ears of corn and simply eat the kernels off the cob. Cooked kernels may also be removed from the cob and served as a vegetable. Certain varieties of corn kernels, when dried, will explode when heated, producing popcorn – corn is also used to produce corn oil, sweeteners such as corn syrup, and cornstarch, which is used as a sweetener and thickening agent in home cooking and processed food products;</p> <p>Wheat can be made into flour and is also used in pasta, pastries, crackers, breakfast cereals, noodles and couscous;</p> <p>Potatoes – used as a vegetable and can be cooked in variety of ways – made into flour;</p> | 6     |

| <b>Question</b> | <b>Answer</b>   | <b>Marks</b> |
|-----------------|---|--------------|
| 2(c)(iii)       | skills used – use of seasonal foods – ease of obtaining foods, e.g. grow in garden at home – oven management – cost / in season – serving | <b>4</b>     |
| 2(c)(iv)        | at least four nutrients and appropriate functions given   | <b>4</b>     |

| Question  | Answer  | Marks |
|-----------|---|-------|
| 3(a)      | dishes chosen – four dishes – suitability   | 4     |
|           | variety of skills chosen without repetition   | 4     |
| 3(b)      | suitable choice of decorated cake   | 1     |
|           | degree of skill in decoration   | 1     |
| 3(c)(i)   | <p><b>Explain why milk must be heat treated. Discuss the sterilising of milk and the production of dried milk powder</b></p> <p>untreated milk may contain tuberculosis – heating kills this bacteria and makes milk safe for human consumption – also extends the shelf life;<br/>sterilisation – milk is homogenised – heated to 113 °C for 15–40 mins – autoclave – bottled and sealed – all bacteria is destroyed;<br/>dried milk – water removed – spray drying – sprayed through a very fine jet into a chamber of hot air – water evaporates and drops of milk fall as a powder– before drying milk is homogenised and may be skimmed;</p>   | 4     |
| 3(c)(ii)  | <p><b>Discuss the nutritive value of milk and state why the nutrients in milk are needed by the body</b></p> <p>protein – HBV – caseinogen, lactalbumin, lactoglobulin – needed for growth, repair, energy and maintenance;<br/>fat – depends on type of milk – in the form of tiny droplets – mainly saturated fats – needed for insulation, energy and protection of delicate organs – feeling of fullness – helps make food palatable;<br/>carbohydrate – lactose – less sweet than other sugars – needed for energy;<br/>vitamin A – to make visual purple, needed for protection against night blindness – mucus membranes moist – healthy skin – growth of children;<br/>vitamin D – formation of bones and teeth – absorption of calcium;<br/>riboflavin – release of energy from carbohydrates – growth – maintenance of nerves;<br/>thiamin – release of energy from amino acids and fat – growth;<br/>calcium – bones and teeth – blood clotting – correct functioning of muscles and nerves;<br/>phosphorus – bones and teeth;</p> | 6     |
| 3(c)(iii) | skills used – use of seasonal foods – ease of obtaining foods, e.g. grow in garden at home – oven management – cost / in season – serving   | 4     |
| 3(c)(iv)  | at least four nutrients and appropriate functions given   | 4     |