Cambridge Assessment International Education

Cambridge International AS & A Level

FOOD STUDIES **9336/02**

Paper 2 Practical Test **May/June 2021**

MARK SCHEME

Maximum Mark: 100

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 May/June 2021 series for most Cambridge IGCSE™, Cambridge International A and AS Level components and some Cambridge O Level components.

This document consists of **11** printed pages.

PUBLISHED

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.

Science-Specific Marking Principles

1	Examiners should consider the context and scientific use of any keywords when awarding marks. Although keywords may be present, marks should not be awarded if the keywords are used incorrectly.
2	The examiner should not choose between contradictory statements given in the same question part, and credit should not be awarded for any correct statement that is contradicted within the same question part. Wrong science that is irrelevant to the question should be ignored.
3	Although spellings do not have to be correct, spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused (e.g. ethane / ethene, glucagon / glycogen, refraction / reflection).
4	The error carried forward (ecf) principle should be applied, where appropriate. If an incorrect answer is subsequently used in a scientifically correct way, the candidate should be awarded these subsequent marking points. Further guidance will be included in the mark scheme where necessary and any exceptions to this general principle will be noted.
5	‘List rule’ guidance For questions that require ***n*** responses (e.g. State **two** reasons …): • The response should be read as continuous prose, even when numbered answer spaces are provided. • Any response marked *ignore* in the mark scheme should not count towards ***n***. • Incorrect responses should not be awarded credit but will still count towards ***n***. • Read the entire response to check for any responses that contradict those that would otherwise be credited. Credit should **not** be awarded for any responses that are contradicted within the rest of the response. Where two responses contradict one another, this should be treated as a single incorrect response. • Non-contradictory responses after the first ***n*** responses may be ignored even if they include incorrect science.

6 Calculation specific guidance

Correct answers to calculations should be given full credit even if there is no working or incorrect working, **unless** the question states 'show your working'.

For questions in which the number of significant figures required is not stated, credit should be awarded for correct answers when rounded by the examiner to the number of significant figures given in the mark scheme. This may not apply to measured values.

For answers given in standard form (e.g. $a \times 10^n$) in which the convention of restricting the value of the coefficient (a) to a value between 1 and 10 is not followed, credit may still be awarded if the answer can be converted to the answer given in the mark scheme.

Unless a separate mark is given for a unit, a missing or incorrect unit will normally mean that the final calculation mark is not awarded. Exceptions to this general principle will be noted in the mark scheme.

7 Guidance for chemical equations

Multiples / fractions of coefficients used in chemical equations are acceptable unless stated otherwise in the mark scheme.

State symbols given in an equation should be ignored unless asked for in the question or stated otherwise in the mark scheme.

Examples of how to apply the list rule
State **three** reasons…. [3]

A

1	Correct	✓	**2**
2	Correct	✓	
3	Wrong	×	

B
(4 responses)

1	Correct, Correct	✓, ✓	**3**
2	Correct	✓	
3	Wrong	ignore	

C
(4 responses)

1	Correct	✓	**2**
2	Correct, Wrong	✓, ×	
3	Correct	ignore	

D
(4 responses)

1	Correct	✓	**2**
2	Correct, CON (of 2.)	×, (discount 2)	
3	Correct	✓	

E
(4 responses)

1	Correct	✓	**3**
2	Correct	✓	
3	Correct, Wrong	✓	

F
(4 responses)

1	Correct	✓	**2**
2	Correct	✓	
3	Correct CON (of 3.)	× (discount 3)	

G
(5 responses)

1	Correct	✓	**3**
2	Correct	✓	
3	Correct Correct CON (of 4.)	✓ ignore ignore	

H
(4 responses)

1	Correct	✓	**2**
2	Correct	×	
3	CON (of 2.) Correct	(discount 2) ✓	

I
(4 responses)

1	Correct	✓	**2**
2	Correct	×	
3	Correct CON (of 2.)	✓ (discount 2)	

Question	Answer	Marks
Section A		
1(a)	Dishes chosen – four dishes – suitability (fruit must be used as a named ingredient, not merely as decoration)	**4**
1(a)	Variety of skills chosen without repetition	**4**
1(b)	Choice of a skilful dish showing convection as a method of heat transfer	**1**
1(b)	Degree of skill for dish chosen in **(b)**	**1**
	Time Plan	
	Sequence	**5**
	Methods	**5**
	Cooking temperature and cooking times	**5**
	Shopping list	**1**
1(c)(i)	***Vegetables can be classified into at least eight groups.*** ***Name six of these groups and give an example of each.*** leaves – cabbage, kale, Brussels sprouts, spinach, cress, watercress, endive, chicory; fruit – tomatoes, cucumber, marrows, courgettes, sweetcorn, peppers, aubergine, pumpkins, okra; seeds / pods – peas, runner beans, broad beans, French beans; stems – celery, asparagus, rhubarb; flowers – cauliflower, broccoli, globe artichoke; roots – carrot, beetroot, swede, parsnip, turnip, radish, celeriac; bulbs – onions, scallions, shallots, leeks, fennel; tubers – potato, sweet potato, Jerusalem artichoke, yams; fungi – mushrooms; sea vegetable – seaweed;	**6**

Question	Answer	Marks
1(c)(ii)	***Fruit and vegetables are good sources of vitamins and minerals.*** ***List four vitamins and minerals found in fruit and vegetables and state a different function of each.*** Vitamin C – maintenance of healthy connective tissue, antioxidant, increase the absorption of iron; Vitamin A/beta carotene – essential for vision in dim light, healthy mucus membranes, healthy skin, antioxidant; Vitamin E – antioxidant, heathy cell membranes, healthy skin; Vitamin K – clotting of blood; Vitamin B group – release of energy from food, healthy nervous system; B6 – red blood cells; B1 / thiamine – make ATP ; B9/folate – red blood cell formation Calcium – healthy bones and teeth, muscle contraction, blood clotting; Iodine – manufactures thyroxine; Iron – manufacture of haemoglobin; Allow antioxidant once only	**4**
1(c)(iii)	***Practical reasons for choice*** Include skills used – use of seasonal foods – ease of obtaining foods – e.g. named ingredient grown in garden/in season – oven management – cost – serving	**4**
1(c)(iv)	***Nutritional value of dish chosen in (b)*** Must give four nutrients and appropriate functions	**4**
Section B		
	Manipulative skill and method of working (Marked at the Centre)	**26**
Section C		
	Results and serving (Marked at the Centre)	**30**

Question	Answer	Marks
Section A		
2(a)	Dishes chosen – four dishes – suitability	**4**
2(a)	Variety of skills chosen without repetition	**4**
2(b)	Choice of a skilful dish showing convection as a method of heat transfer	**1**
2(b)	Degree of skill for dish chosen in **(b)**	**1**
	Time Plan	
	Sequence	**5**
	Methods	**5**
	Cooking temperature and cooking times	**5**
	Shopping list	**1**
2(c)(i)	***Give three reasons why meat might be tough and suggest three ways in which tough meat can be tenderised before cooking.*** long, thick muscle fibres; old animal; muscles that have had most movement; animal stressed before slaughter; contains a large amount of connective tissue; incorrect method of cooking; newly slaughtered, not hung properly; mince / cut into small pieces; beat with a rolling pin; scoring; marinate in lemon juice / vinegar etc.; use of enzymes e.g. papain from papaya, bromelain from pineapple, ficin from figs, actinidin from kiwi fruit; add salt;	**6**

Question	Answer	Marks
2(c)(ii)	***Give four reasons for cooking food.*** to make it safe / destroy bacteria; to destroy natural toxins; give hot food in cold weather; reduces bulk such as green vegetables; to make food easier to eat/tenderise meat; makes food easier to digest; makes food more attractive/changes colour e.g. meat changes from red to brown; change texture; develop flavour; create new dishes; adds variety; necessary for some processes like sauces; preserves food; develops aroma;	**4**
2(c)(iii)	***Practical reasons for choice*** Include skills used – use of seasonal foods – ease of obtaining foods – e.g. named ingredient grown in garden/in season – oven management – cost – serving	**4**
2(c)(iv)	***Nutritional value of dish chosen in (b)*** Must give four nutrients and appropriate functions	**4**
Section B		
	Manipulative skill and method of working (Marked at the Centre)	**26**
Section C		
	Results and serving (Marked at the Centre)	**30**

Question	Answer	Marks
Section A		
3(a)(i)	Dishes chosen – four dishes – suitability	**4**
3(a)(ii)	Variety of skills chosen without repetition	**4**
3(b)(i)	Choice of a skilful dish showing convection as a method of heat transfer	**1**
3(b)(ii)	Degree of skill for dish chosen in (b)	**1**
	Time Plan	
	Sequence	**5**
	Methods	**5**
	Cooking temperature and cooking times	**5**
	Shopping list	**1**
3(c)(i)	***Give an account of the digestion of carbohydrates and lipids*** Mouth – salivary amylase converts cooked starch to maltose. Duodenum – pancreatic amylase continues the breakdown of undigested starch to maltose. Ileum – maltase breaks down maltose to glucose; invertase / sucrase breaks down sucrose to glucose and fructose; lactase breaks down lactose to glucose and galactose. *Lipids* Duodenum – bile made in the liver; stored in the gall bladder emulsifies fats to disperse them in the liquid in small droplets; pancreatic lipase breaks fat into soluble glycerol and insoluble fatty acids; fatty acids react with the bile to become soluble. Ileum – lipase from the intestinal juice completes the breakdown of fat into fatty acids and glycerol.	**6**

Question	Answer	Marks
3(c)(ii)	***Discuss the effect of moist methods of cooking on starch and thiamine*** Starch: gelatinisation of starch – starch grains are in suspension; when heated to 60 °C the starch grains swell; liquid diffuses into the grains at 85 °C; amylose and amylopectin are dispersed in the liquid; a sol is formed; gelatinisation is completed at 96 °C, results in liquid being thickened; Thiamine: soluble in water; alkalis e.g. bicarbonate of soda used to give a better colour to green vegetables will destroy thiamine; destroyed by high temperatures e.g. pressure cooking;	**4**
3(c)(iii)	***Practical reasons for choice*** Include skills used – use of seasonal foods – ease of obtaining foods – e.g. named ingredient grown in garden/in season – oven management – cost – serving	**4**
3(c)(iv)	***Nutritional value of dish chosen in (b)*** Must give four nutrients and appropriate functions	**4**
Section B		
	Manipulative skill and method of working (Marked at the Centre)	**26**
Section C		
	Results and serving (Marked at the Centre)	**30**