



MINISTRY OF EDUCATION, SINGAPORE
in collaboration with
CAMBRIDGE ASSESSMENT INTERNATIONAL EDUCATION
General Certificate of Education Normal (Academic) Level

CANDIDATE
NAME

--

CENTRE
NUMBER

S				
---	--	--	--	--

INDEX
NUMBER

--	--	--	--

NUTRITION AND FOOD SCIENCE

6073/01

Paper 1

For examination from 2022

SPECIMEN PAPER

1 hour 30 minutes

Candidates answer on the Question Paper.

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

Write your centre number, index number and name in the spaces at the top of this page.

Write in dark blue or black pen.

You may use an HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue or correction fluid.

DO **NOT** WRITE ON ANY BARCODES.

Section A

Answer **all** questions.

For each question there are four possible answers **A, B, C** and **D**. Tick the **one** you consider correct.

Each correct answer will score one mark.

Section B and Section C

Answer **all** questions.

Write your answers in the spaces provided on the Question Paper.

The number of marks is given in brackets [] at the end of each question or part question.

The use of a calculator is permitted.

This document consists of **17** printed pages and **1** blank page.



Singapore Examinations and Assessment Board



Cambridge Assessment
International Education

Section A

Answer **all** questions. For each question, tick the answer (**A**, **B**, **C** or **D**) which you consider correct.

1 Which food contains high biological value (HBV) protein?

A cheese

B nuts

C pasta

D rice

[1]

2 Which is **not** a disaccharide?

A glucose

B lactose

C maltose

D sucrose

[1]

3 Two incomplete statements about fats are shown.

Statement 1: Polyunsaturated fats have carbon–carbon bonds in their structure.

Statement 2: An example of a food that contains polyunsaturated fat is

Which row correctly completes statement 1 and statement 2?

	statement 1	statement 2
A	single	butter
B	double	butter
C	single	oily fish
D	double	oily fish

A

B

C

D

[1]

4 Citrus fruit is a good source of which nutrient?

A fat

B sodium

C vitamin C

D vitamin K

[1]

5 Which vitamin is produced when skin is exposed to the sun?

A vitamin A

B vitamin D

C vitamin E

D vitamin K

[1]

6 Which is a function of phosphorus in the body?

A Helps to store and supply energy.

B Helps to maintain healthy skin.

C Needed for normal blood clotting.

D Needed for the control of nerves and muscles.

[1]

7 Which statement describes a function of dietary fibre/non-starch polysaccharide (NSP) in the body?

A Absorbs and retains water making it easier to excrete waste materials.

B Encourages the production of cholesterol in the body.

C Helps to produce red blood cells to prevent anaemia.

D Increases rate at which glucose is released into the bloodstream.

[1]

- 8 Sometimes it is necessary to modify a recipe to make it suitable for specific groups of consumers.

A basic recipe for a pizza is:

250g plain / all-purpose flour
 2g salt
 4g instant yeast
 150ml warm water
 6g melted butter
 75g fresh tomato sauce
 45g capsicum
 100g mozzarella

Which row correctly identifies modifications necessary for a consumer who has high cholesterol levels and constipation?

	modification 1	modification 2
A	change mozzarella to low-fat mozzarella	change capsicum to shredded chicken
B	change butter to coconut oil	change plain flour to wholemeal flour
C	change mozzarella to low-fat mozzarella	change plain flour to wholemeal flour
D	change butter to coconut oil	change capsicum to shredded chicken

A

B

C

D

[1]

- 9 The nutritional information from the labels of two yoghurts is shown.

Nutrition information	
Serving size: 1 container	Qty per serving
Energy	170 kcal
Total fat	2.5 g
Saturated fat	2 g
Cholesterol	10 mg
Sodium	85 mg
Carbohydrate	33 g
Sugars	26 g
Protein	5 g
Vitamin A	0.1 mg
Vitamin D	7 mcg
Calcium	453 mg
Iron	0.5 mg

yoghurt 1

Nutrition information	
Serving size: 1 container	Qty per serving
Energy	140 kcal
Total fat	2.5 g
Saturated fat	2 g
Cholesterol	10 mg
Sodium	75 mg
Carbohydrate	25 g
Sugars	21 g
Protein	5 g
Vitamin A	0.07 mg
Vitamin D	1.5 mcg
Calcium	150 mg
Iron	0 mg

yoghurt 2

Which statement is true based on the information given on the labels of the yoghurts?

- A** Yoghurt 1 is more suitable for consumers with high cholesterol levels.
- B** Yoghurt 1 is more suitable for consumers with osteoporosis.
- C** Yoghurt 1 is more suitable for consumers with type 2 diabetes.
- D** Yoghurt 2 is more suitable for consumers with anaemia.

[1]

- 10 Seafood is often an important part of a balanced diet.

Which statement about the nutritional content of seafood is correct?

- A** Flesh of white fish contains saturated fats.
- B** Oily fish is a good source of polyunsaturated fats.
- C** Shellfish is a good source of vitamins A and C.
- D** White fish is a good source of low biological value (LBV) protein.

[1]

11 Which nutrient is **not** found in eggs?

- A fat
- B iron
- C vitamin B₂
- D vitamin C

[1]

12 Which term describes the effect of dry heat on starch?

- A caramelisation
- B dextrinisation
- C emulsification
- D gelatinisation

[1]

13 The shortcrust pastry of an apple pie is tough and hard after baking.

Which row correctly shows reasons why the pastry may be tough and hard?

	uneven distribution of fat in the mixture	handling dough too much	adding too much liquid	oven temperature too low
A	x	✓	✓	x
B	x	✓	x	✓
C	✓	x	✓	x
D	✓	✓	x	✓

- A
- B
- C
- D

[1]

14 Which method is used when making a butter cake?

- A blending
- B creaming
- C rubbing-in
- D whisking

[1]

15 Sensory evaluation is used to investigate food products and recipes.

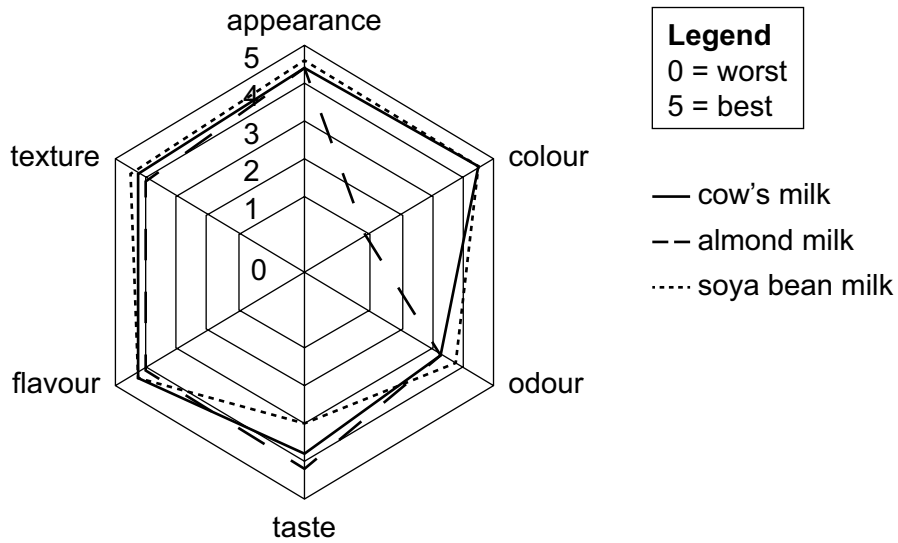
Which are reasons for conducting sensory evaluation of food products?

	to find out what consumers like and why	to monitor the bacterial content of dishes	to find out if consumers know a product has been changed
A	✓	✓	✓
B	✗	✗	✓
C	✓	✗	✓
D	✓	✗	✗

- A
- B
- C
- D

[1]

16 The sensory analysis star diagram shows results for taste testing of milkshakes made from cow's milk, almond milk and soya bean milk.



Evaluate the star diagram and choose which milkshakes would best meet the following consumer needs.

Consumer needs: To be suitable for vegans
 To have excellent flavour and colour

Milkshakes made from:

- A almond milk only
- B almond milk and soya bean milk
- C cow's milk and soya bean milk
- D soya bean milk only

[1]

[Total: 16]

Section B

Answer **all** questions.

- 17 Complete the table below to give **two** functions and **two** good sources of the named nutrients.

nutrient	functions	good sources
vitamin A	1	1
	2	2
vitamin D	1	1
	2	2

[8]

- 18 My Healthy Plate recommends to make water your choice of drink.

- (a) Name the health problem which results from a deficiency of water.

..... [1]

- (b) Thirst is one symptom of a deficiency of water.

Name **two** other symptoms of a deficiency of water.

1

2

[2]

- (c) State **two** different food sources of water.

1

2

[2]

19 (a) Define the term *energy balance*.

.....
 [1]

(b) State **two** different ways the body uses energy.

1
 2 [2]

(c) Name the vitamin which helps release energy from nutrients.

..... [1]

20 Vitamin E is important in a balanced diet.

(a) State **one** function of vitamin E.

..... [1]

(b) Name **two** good sources of vitamin E.

1
 2 [2]

21 (a) State **four** reasons for cooking food.

1
 2
 3
 4 [4]

(b) Heat can be transferred by conduction, convection or radiation.

Name **one** different cooking method for each method of heat transference.

(i) conduction [1]
 (ii) convection [1]
 (iii) radiation [1]

22 Study the label below from a packet of battered fish fingers.

Sea Shores 12 Crispy Battered Fish Fingers			
Quantity 300 g	Nutrition information		
Ingredients minced cod (65%), water, potato flour, vegetable oil, maize flour (batter coating) wheat flour, water, rice flour, paprika, skimmed milk powder, vegetable oil, salt (sodium chloride), yeast, mustard powder, white pepper, turmeric		per 100 g (fried)	per fish finger (fried)
	Energy	1205 kJ 288 kcal	301 kJ 72 kcal
	Protein	12.4 g	3.1 g
	Carbohydrate	24.0 g	6.0 g
	Sugar	0.8 g	0.2 g
	Total fat	16.0 g	4.0 g
	Saturated fat	2.8 g	0.7 g
	Fibre	1.3 g	0.3 g
	Sodium	0.44 mg	0.11 mg
Cooking instructions shallow fry for 3 minutes each side		Use by: 20/11/22	

(a) Name the ingredient used in the least quantity in the batter coating.

..... [1]

(b) State how much energy would be provided by eating **two** shallow-fried fish fingers.

..... [1]

(c) Name **one** of the ingredients which provides starch.

..... [1]

(d) Name **one** of the ingredients which provides calcium.

..... [1]

(e) State **two** functions of the batter coating on the fish fingers.

1

.....

2

.....

[2]

(f) Explain why the fish fingers should be eaten before their use-by date.

..... [1]

(g) The instructions suggest shallow frying the fish fingers.

Give **two** disadvantages of shallow frying as a method of cooking.

disadvantage 1

.....

disadvantage 2

.....

[2]

(h) Suggest **two** accompaniments which could be served with the fish fingers to increase the dietary fibre/non-starch polysaccharide (NSP) content of the meal.

1

2

[2]

(i) When white fish is steamed, it can lack colour and flavour.

Suggest a different way to improve each of these sensory properties for a meal that includes steamed white fish.

colour

flavour

[2]

[Total: 40]

Section C

Answer **all** questions.

23 Cow's milk is an important food in the diet.

(a) Discuss the nutritional value of cow's milk.

[6]

(b) One way to include cow's milk in the diet is in a milkshake.

Suggest, with examples, other ways that cow's milk can be included in the diet and food preparation.

[6]

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

A series of horizontal dotted lines for writing.

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

Cambridge Assessment International Education is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which itself is a department of the University of Cambridge.