



General Certificate of Secondary Education
2011–2012

Science: Single Award (Modular)

Staying Alive
Module 1
Foundation Tier
[GSC11]

MONDAY 27 FEBRUARY 2012
9.30 am–10.15 am



Centre Number

71

Candidate Number

TIME

45 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.
Write your answers in the spaces provided in this question paper.
Answer **all seven** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 45.
Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	

Total Marks	
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1 (a) (i) Below are two vitamins and some foods.

Use lines to link each vitamin with **one** food that has a lot of that vitamin.

VITAMIN

Vitamin D

Vitamin C

FOOD

oily fish

noodles

lemons

[2]

(ii) Complete the following sentence.

Choose from:

water

sunlight

heat

We also get vitamin D from the action of _____
on our skin.

[1]

(b) The table below shows the mineral content of different types of cheese.

Type of cheese	Calcium/mg	Iron/mg
Cheddar	110	0.1
Cream	50	1.5
Cottage	70	3.9
Edam	110	2.0

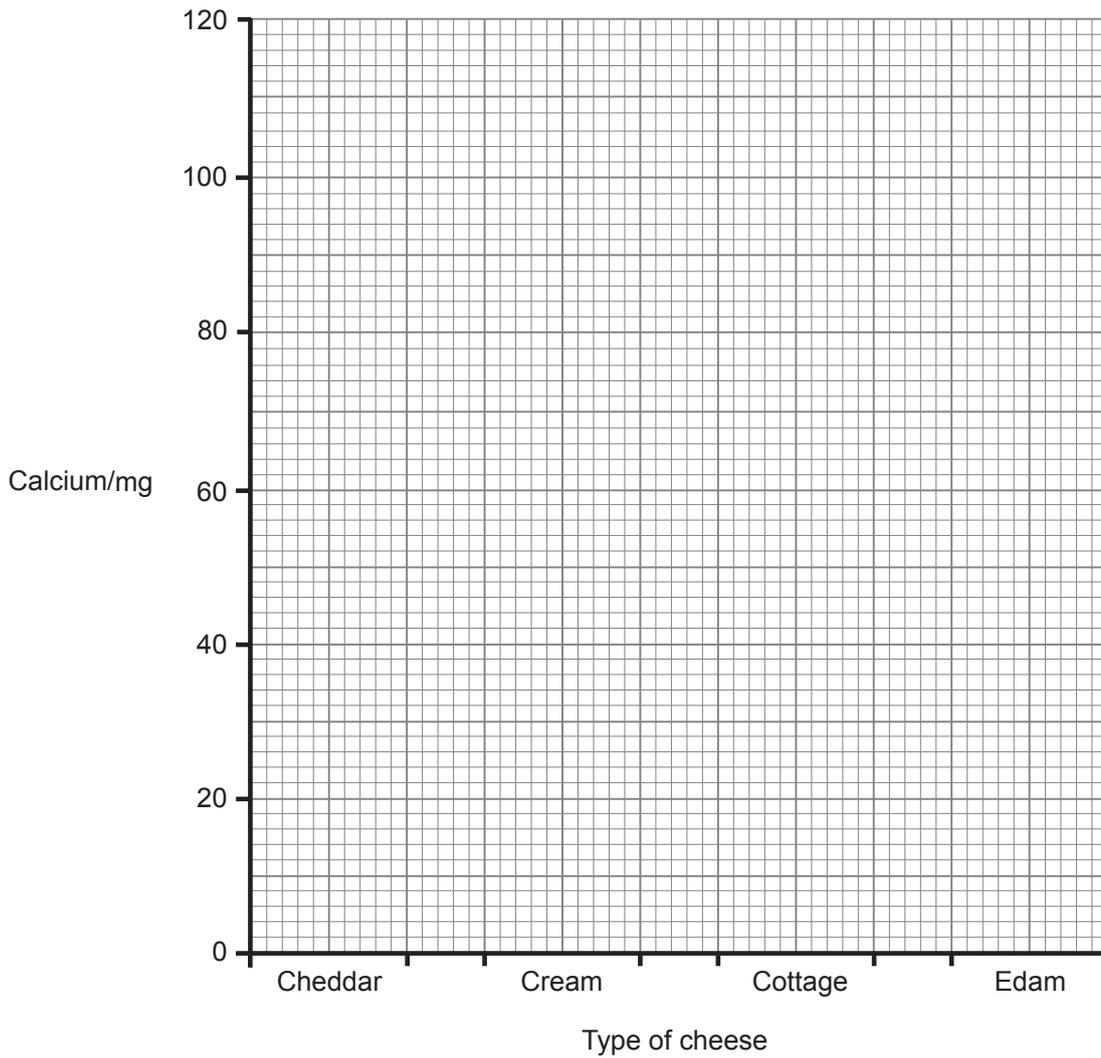
Examiner Only

Marks

Remark

(i) Draw a bar chart showing the **calcium** content of these cheeses on the grid below. [2]

Examiner Only	
Marks	Remark



(ii) Name the type of cheese that has the **least** amount of calcium.
 _____ [1]

(c) Anaemia is a disease which affects red blood cells.

Name a cheese from the table opposite which would be best for someone who suffers from anaemia.

Give a reason for your choice.

Cheese _____ [1]

Reason _____

_____ [1]

- 2 (a) Three pupils were each given a different plant and asked to test five of its leaves for starch.

Their results are shown below.

Pupil	Leaf number				
	1	2	3	4	5
Sean	✓	✗	✓	✗	✓
George	✗	✗	✓	✗	✗
Stacey	✓	✓	✓	✓	✓

Key

✓ – starch present
✗ – starch absent

Name the pupil whose plant had most light.

Give a reason for your answer.

Name of pupil _____ [1]

Reason _____ [1]

- (b) Complete the sentences below.

Choose from:

light alcohol bottom top chlorophyll

Leaves are green due to the presence of _____ .

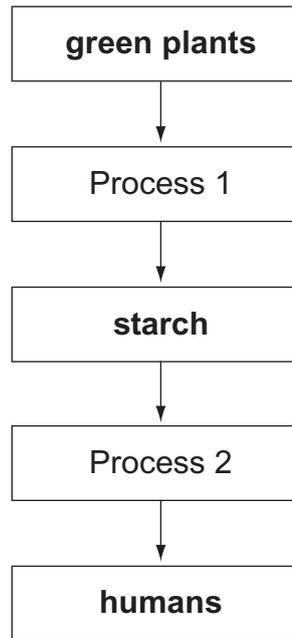
This is needed to trap _____ and is mostly

found at the _____ of the leaf. [3]

Examiner Only

Marks Remark

(c) The diagram below shows the links between green plants and humans.



Name the processes 1 and 2.

Choose from:

breathing photosynthesis feeding reproducing

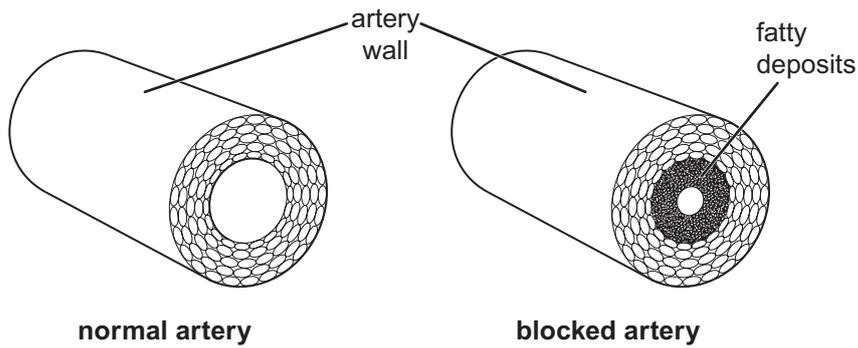
Process 1 _____

Process 2 _____

[2]

Examiner Only	
Marks	Remark

- 3 (a) The diagrams below show heart arteries. These provide the heart with food and oxygen.



- (i) Name the process which uses food and oxygen to give heart cells energy.

Choose from:

reproduction

respiration

digestion

_____ [1]

- (ii) Complete the word equation for the process named above.

Food + oxygen \rightarrow carbon dioxide + _____ + energy [1]

- (iii) Use the diagram to suggest how people with blocked arteries could have a heart attack.

 _____ [2]

Examiner Only

Marks Remark

- (b) (i) The table below shows changes that can reduce the risk of heart disease.

Complete the table by placing a tick (✓) to show if the change is to diet or lifestyle.

Changes	Diet	Lifestyle
exercise regularly		
less stress		
less salt		
less saturated fat		

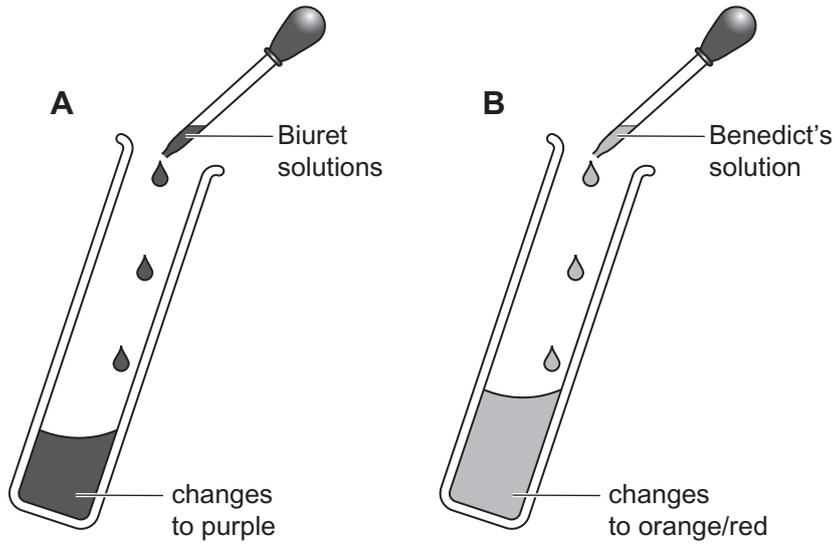
[2]

- (ii) Suggest **one** way that the government could encourage people to take more exercise.

_____ [1]

Examiner Only	
Marks	Remark

4 (a) The diagrams **A** and **B** show food tests being carried out.



(i) Name the food type being tested in each diagram.

A _____

B _____

[2]

(ii) Suggest why it is important to know which food types we are eating.

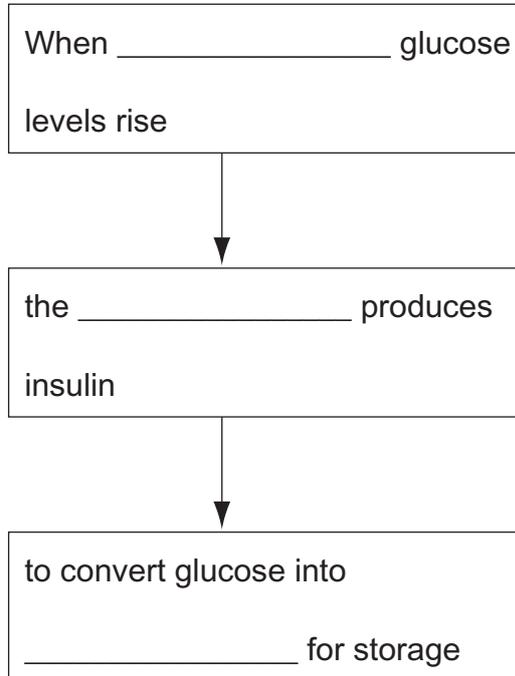
_____ [1]

Examiner Only	
Marks	Remark

- (b) (i) Complete the flow chart below to explain the function of insulin in the body.

Choose from:

liver glycogen blood pancreas cell fat



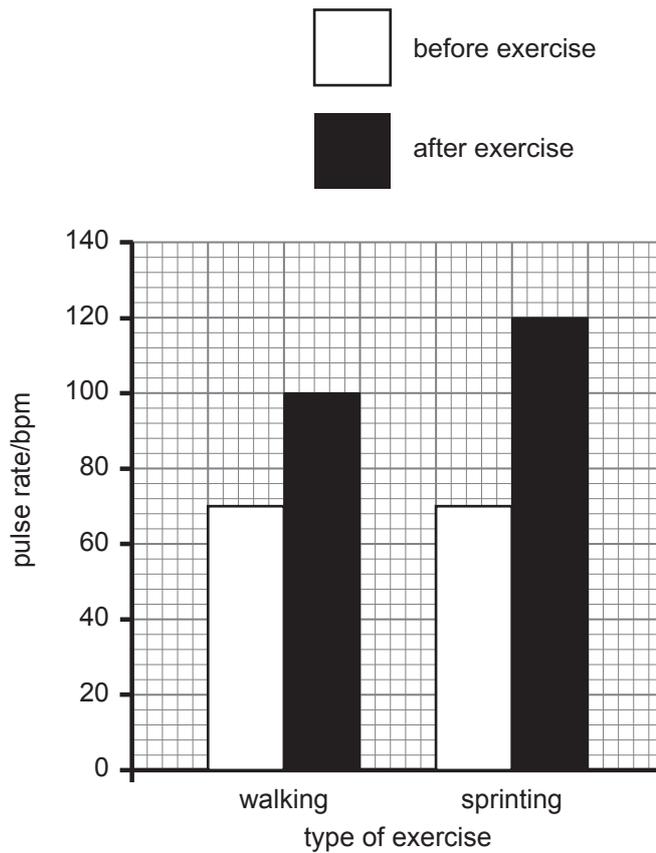
[3]

- (ii) Name the disease caused if insulin can no longer function.

_____ [1]

Examiner Only	
Marks	Remark

5 The bar chart shows the effect of two types of exercise on Simon's pulse rate.



(a) Calculate the increase in pulse rate caused by walking.

Show your working out.

_____ bpm [2]

(b) Explain fully why sprinting causes a greater increase in pulse rate than walking.

 _____ [2]

Examiner Only	
Marks	Remark

- 6 The poster below was used in an advertising campaign for 'CCEA' coffee.

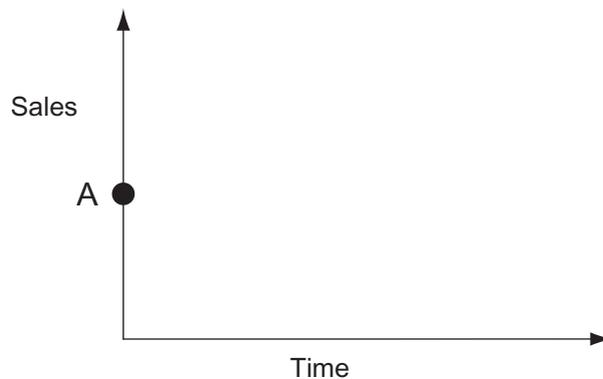


The makers of 'TASTY' coffee complained to the ASA (Advertising Standards Agency) saying that the poster was misleading because the survey was unreliable.

- (a) State **three** pieces of information about the survey that would be needed to decide if it was unreliable.

 [3]

- (b) The ASA ruled that the poster was not misleading. Starting at point A below sketch two lines to suggest what might happen to the sales of each coffee after this ruling was made public. Label each line with the name of the coffee.



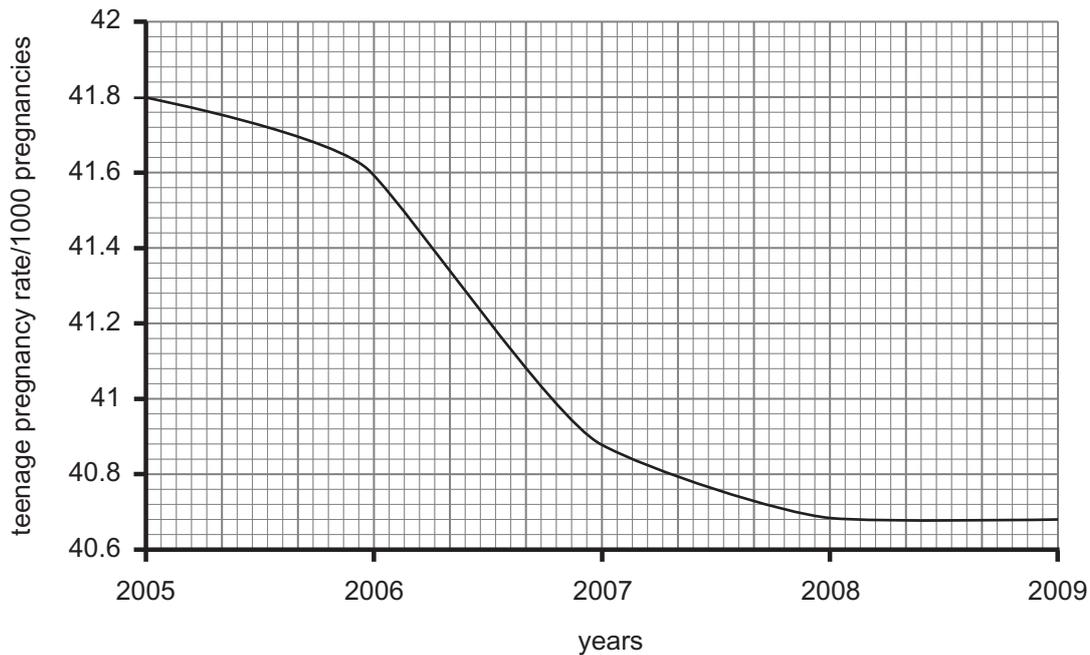
[2]

- (c) A cup of coffee is mostly water. State **one** function of water in the diet.

 [1]

Examiner Only	
Marks	Remark

- 7 The graph below shows the rate of teenage pregnancies in a city from 2005 to 2009.



The government introduced measures in 2005 aimed at reducing the rate of teenage pregnancies.

- (a) Using data from the graph describe the evidence which would suggest that these measures are:

1. working.

_____ [1]

2. not working as well as hoped.

 _____ [2]

- (b) It has been suggested that there is a higher rate of teenage pregnancies in England than in Northern Ireland. How could you prove that this suggestion is correct?

 _____ [3]

Examiner Only	
Marks	Remark

THIS IS THE END OF THE QUESTION PAPER

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