



General Certificate of Secondary Education
2012

Centre Number

71

Candidate Number

Science: Single Award (Modular)

Staying Alive
Module 1
Foundation Tier
[GSC11]



MONDAY 12 NOVEMBER 2012, AFTERNOON

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

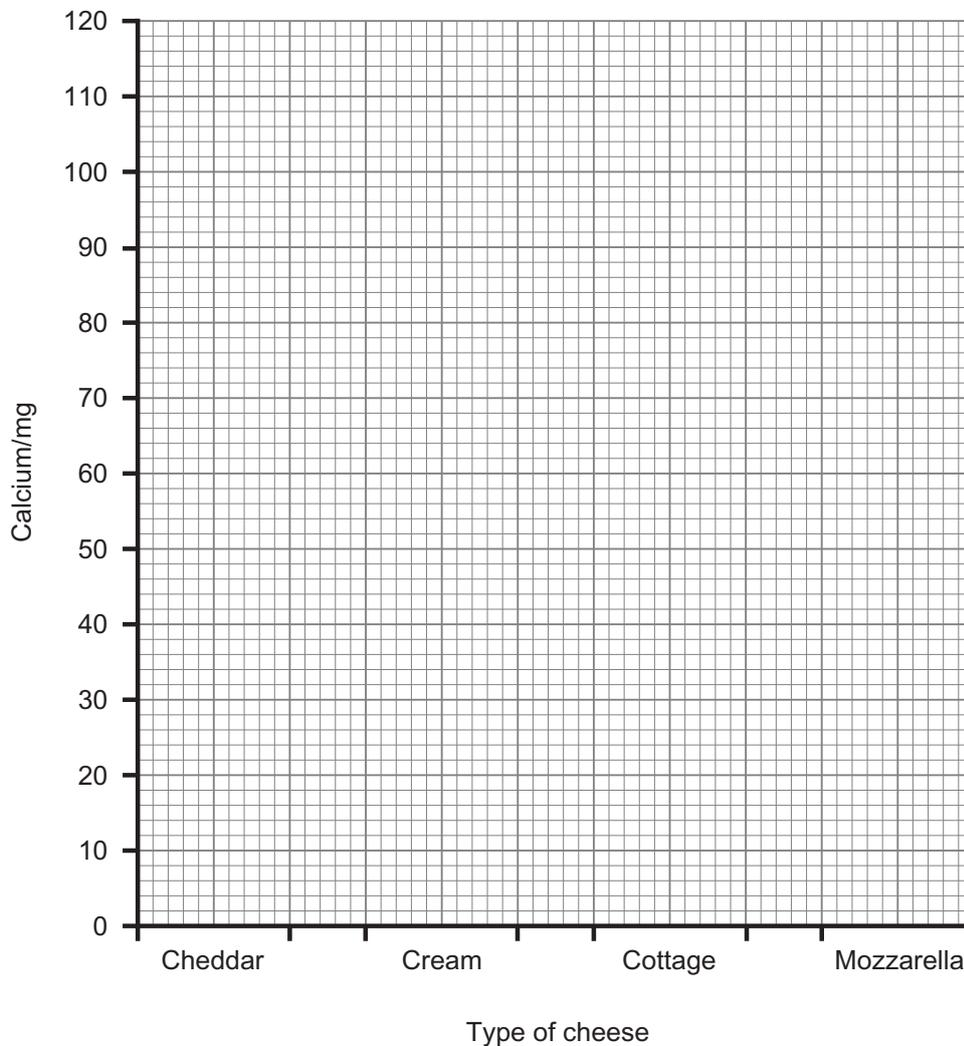
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1 (a) The table below shows the iron and calcium content of different types of cheese.

Type of cheese	Iron /mg	Calcium /mg
Cheddar	0.1	100
Cream	1.6	20
Cottage	3.9	70
Mozzarella	2	110

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



[2]

Examiner Only	
Marks	Remark

- (ii) Calculate the difference in **calcium** content of cream cheese and cottage cheese.

(Show your working out.)

_____ mg [2]

- (iii) Anaemia is a disease which reduces the number of red blood cells. Which cheese would be best for someone who suffers from anaemia? Give a reason for your choice.

Cheese _____

Reason _____ [2]

- (b) Apart from minerals, such as iron and calcium, name and state the function of another **food type** which all cheese contains.

Name _____

Function _____ [2]

Examiner Only	
Marks	Remark

2 (a) The statements below show changes that can reduce the risk of having a heart attack.

Circle the statements that are lifestyle changes.

reduce salt intake

reduce time spent watching television

reduce stress

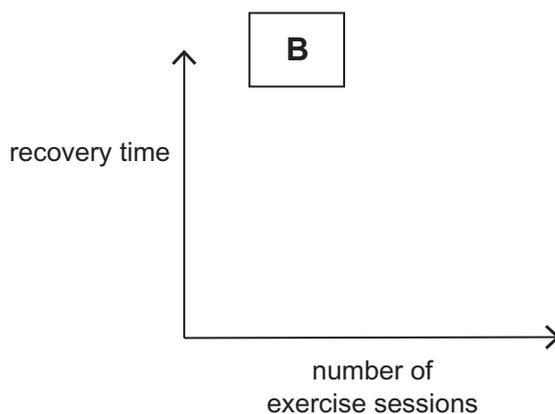
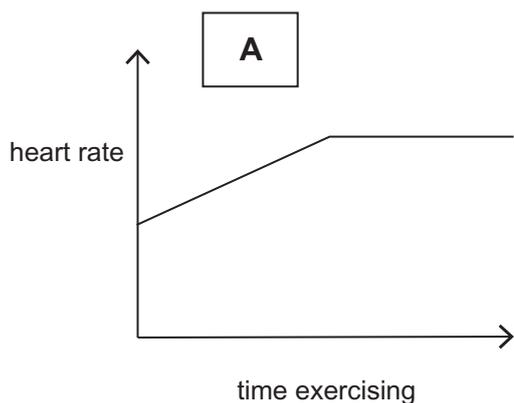
reduce cholesterol levels

stop smoking

reduce intake of fats

[3]

(b) Graph **A** below shows how exercise affects heart rate. Sketch a graph on the axes **B** below to show how the number of exercise sessions affects the **recovery time** of the heart.



[2]

(c) Complete the sentence below.

Choose from:

wholewheat : protein : fibre : breakfast

People with constipation are told to increase their intake

of _____ cereals because they contain a lot

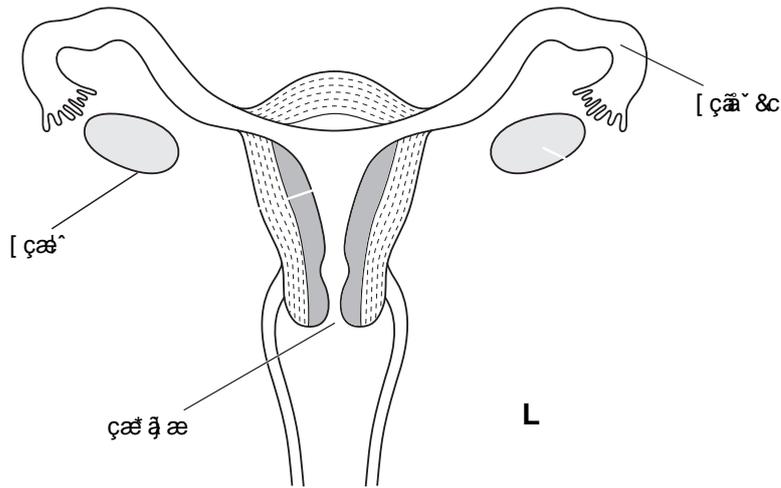
of _____.

[2]

Examiner Only	
Marks	Remark

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(Questions continue overleaf)

3 (a) The diagram shows the female reproductive system.



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(i) Draw a line from **X** to the part that receives sperm first. [1]

(ii) The statements below describe what happens to the ovum (egg) from release to implantation but they are in the wrong order.

- A** enters the oviduct
- B** embeds in uterus
- C** enters uterus
- D** released from ovary
- E** is fertilised

Using the letters **A**, **B**, **C**, **D** and **E** place the statements in the correct order below.

The first has been done for you.

 D _____ [2]

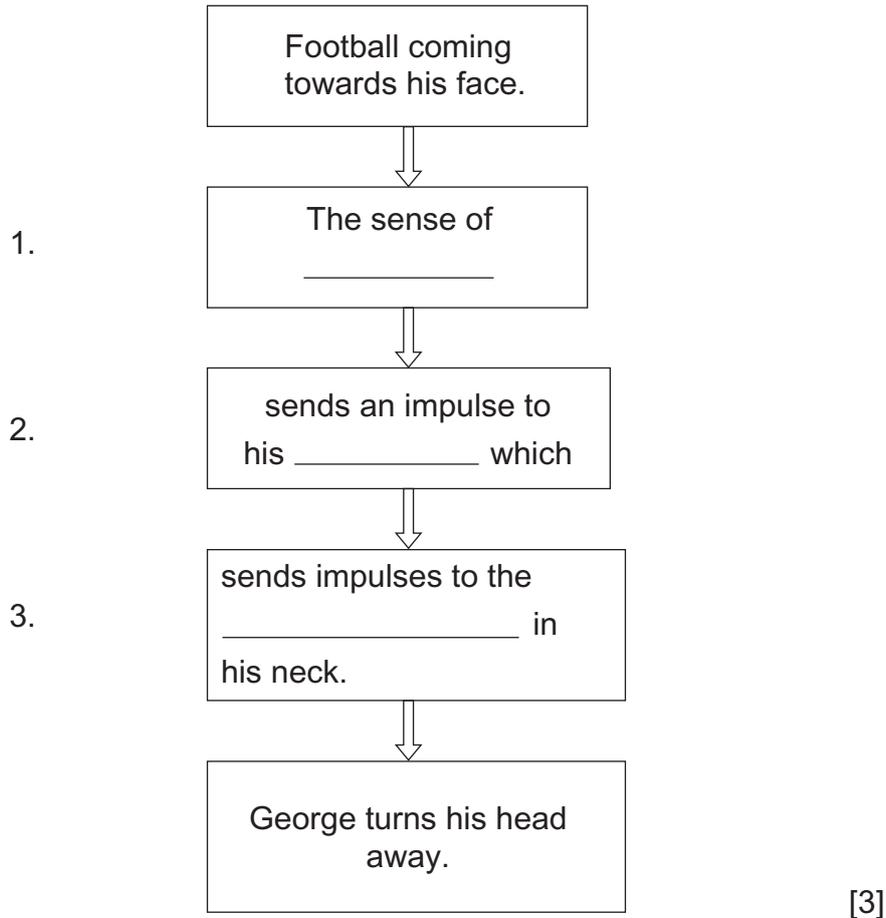
Examiner Only	
Marks	Remark

- 4 (a) The nose is an example of a sense organ. Name **two** other sense organs.

1. _____

2. _____ [2]

- (b) George sees a football coming towards his face and wants to avoid it hitting him. Complete the flowchart below at boxes 1, 2 and 3 to show how a voluntary response turns his head away.



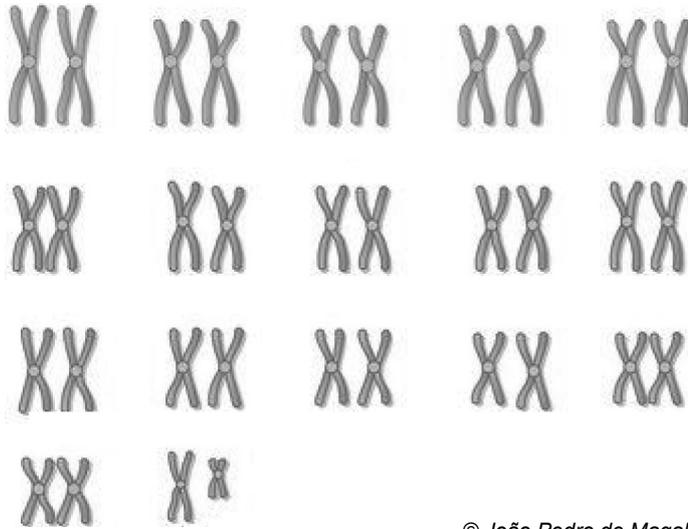
- (c) Complete the following sentence.

The central nervous system is made up of the _____
and the _____ [2]

Examiner Only	
Marks	Remark

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(Questions continue overleaf)

5 (a) The diagram shows all the chromosomes in the nucleus of a cell.



© João Pedro de Magalhães
<http://jp.senescence.info/thoughts/karyotype.gif>

(i) How many chromosomes are in this cell?

_____ [1]

(ii) Explain why this cell cannot be:

human.

a sex cell.

 _____ [2]

Examiner Only

Marks Remark

6 Shown below is an advert for a chocolate bar.

<Uj Y'UVUF'cZ
 W cWwivYUF
 UZyf'gW cc`!
 mī a a mī`



© iStockphoto / Thinkstock

(a) Suggest what type of person this advert is aimed at.

_____ [1]

(b) Suggest **three** reasons why there were many complaints about this advert on health grounds.

1. _____

2. _____

3. _____ [3]

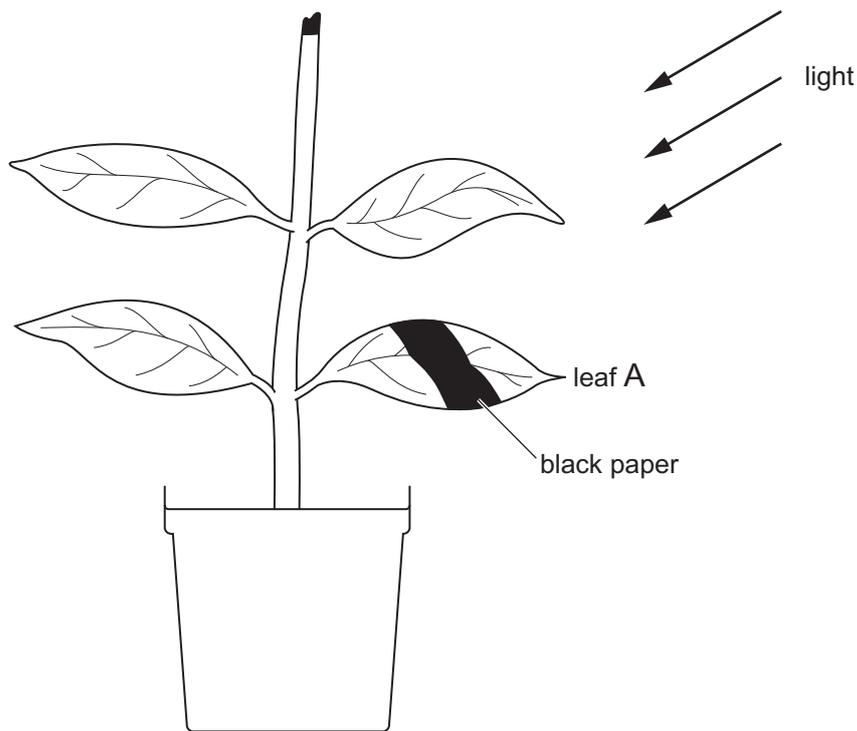
(c) Guidelines state that only a small amount of chocolate should be eaten but many people ignore this. Suggest a reason why.

_____ [1]

Examiner Only

Marks Remark

- 7 The plant below can be used to investigate if light is needed for photosynthesis. It is left in light conditions for eight hours.



- (a) Leaf A is then tested for starch using Iodine. Describe and explain the result you would expect for the covered and uncovered parts of the leaf.

[3]

- (b) Describe any **three** steps that have to be done when testing a leaf for starch. Explain the reason for each of these steps.

[3]

- (c) State why photosynthesis is vital for humans.

[1]

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Marks	Remark

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