

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS International General Certificate of Secondary Education

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CANDIDATE NAME					
CENTRE NUMBER			CANDIDATE NUMBER		

BIOLOGY 0610/53

Paper 5 Practical Test

May/June 2010

1 hour 15 minutes

Candidates answer on the Question Paper.

Additional Materials: As listed in Confidential Instructions.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

You may use a medium (HB) pencil for any diagrams or graphs.

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

DO NOT WRITE IN ANY BARCODES.

Answer both questions.

At the end of the examination, fasten all your work securely together.

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

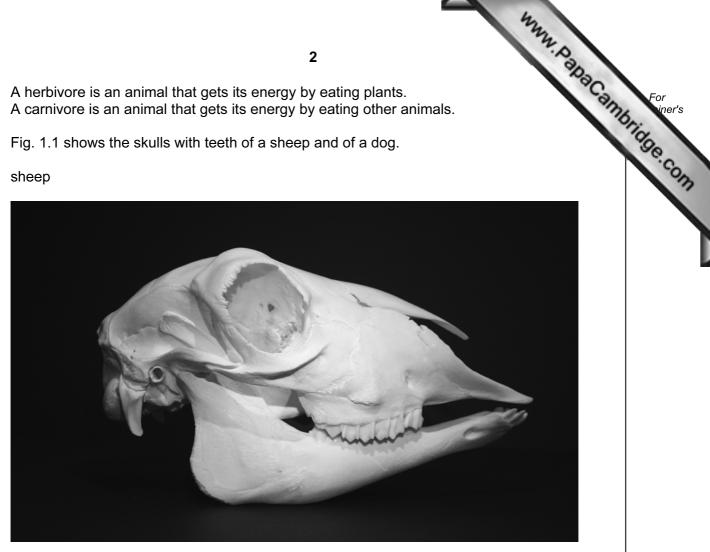
For Examiner's Use					
1					
2					
Total					

This document consists of 10 printed pages and 2 blank pages.



- A herbivore is an animal that gets its energy by eating plants. A carnivore is an animal that gets its energy by eating other animals. 1
 - Fig. 1.1 shows the skulls with teeth of a sheep and of a dog.

sheep



dog



Fig. 1.1

(a) (i)	Describe one similarity, related to nutrition, that you can observe betweeth of the two skulls.	For iner's
(ii)	Complete Table 1.1 to give two differences related to nutrition that you	[1]

(ii) Complete Table 1.1. to give two differences, related to nutrition, that you can observe between the teeth of the two skulls.

Table 1.1

	sheep	dog
difference 1		
difference 2		

[2]

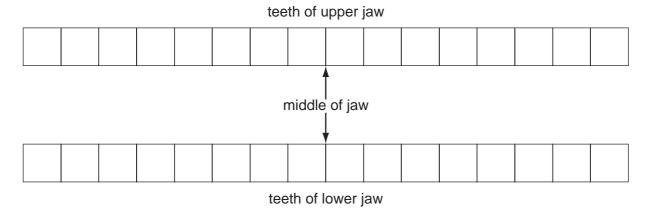
(b) (i) Using the mirror provided, view your teeth.

www.PapaCambridge.com Complete the Table 1.2 to show which type of teeth you have present. Write letter in each box to show the type of tooth, using the following letters to identify your teeth:

С = canine = incisor Μ = molar Ρ = premolar

Χ = no tooth present

Table 1.2



[2]

(11)	Fig. 1.1.	two	ways	ın	which	your	teeth	differ	from	the	teeth	of	the	dog	shown	ıın
								•••••								••••
					•••••			••••••								[2]

Much of the food that we eat is cooked. This softens the materials.

www.PapaCambridge.com You are provided with a sample of raw leaves, labelled S1 and a sample of cooks leaves of the same species, labelled **S2**.

You are going to investigate the effect of cooking on the carbohydrate content of these leaves.

(c)	(i)	Describe how you would safely test S1 and S2 to compare their reducing sugar content.
		[5]
	(ii)	Describe how you would test S1 and S2 to compare their starch content.
		[2]

(iii) Carry out these tests on S1 and S2 and record your observations in Table 1.

Carry out these tests	6 s on S1 and S2 and record you Table 1.3	ur observations in Table 1.	Cann For iner's
	S1	S1	S.COM
reducing sugar			
starch			

	[4]
(iv)	What do your results indicate about the effect of cooking on the carbohydrate content of these leaves?
	[2]
(v)	Suggest an explanation for the results you obtained.
	[1]
	[Total: 21]

2 You are provided with ten leaves attached to a branch, labelled **S3**.

		7 provided with ten legues attached to a branch labelled \$2	
You	are	provided with ten leaves attached to a branch, labelled S3.	For iner's
The brar		ves vary in size as they are at different stages of development along the	TOTIGE S
Lay	the	branch flat on the bench.	COM
(a)	(i)	Describe the arrangement of the leaves on the branch.	
			[2]

(ii) Make a large, labelled drawing of the lower surface of the largest leaf while still attached to the branch.

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Question 2 continues on Page 9

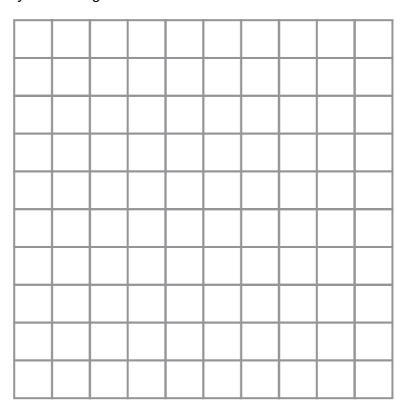
For iner's

(iii) Measure the size of the grid squares.

Remove the leaf you have drawn and lay it flat on the printed grid below.

Draw the outline of the leaf and calculate the leaf area of this leaf.

Show your working.



Space for working

- (b) Detach the leaf at one end of the branch.
 - (i) Measure the length of the blade of this leaf in mm and record it in Table 2.1. If the leaf has a leaf stalk, do **not** include this in the measurement.

www.PapaCambridge.com Repeat for all the remaining leaves on the branch, in order, including the leaf you measured in (a)(iii).

Table 2.1

Leaf number from end of branch	Length of leaf blade/mm
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

(ii)

Plot the data to show the relationship between the position of the leaf on the branch and the length of leaf blade.

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	[5]
Using your graph, describe the relationship between the position of the leaf on branch and the length of leaf blade.	the
	[3]

[Total: 19]

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