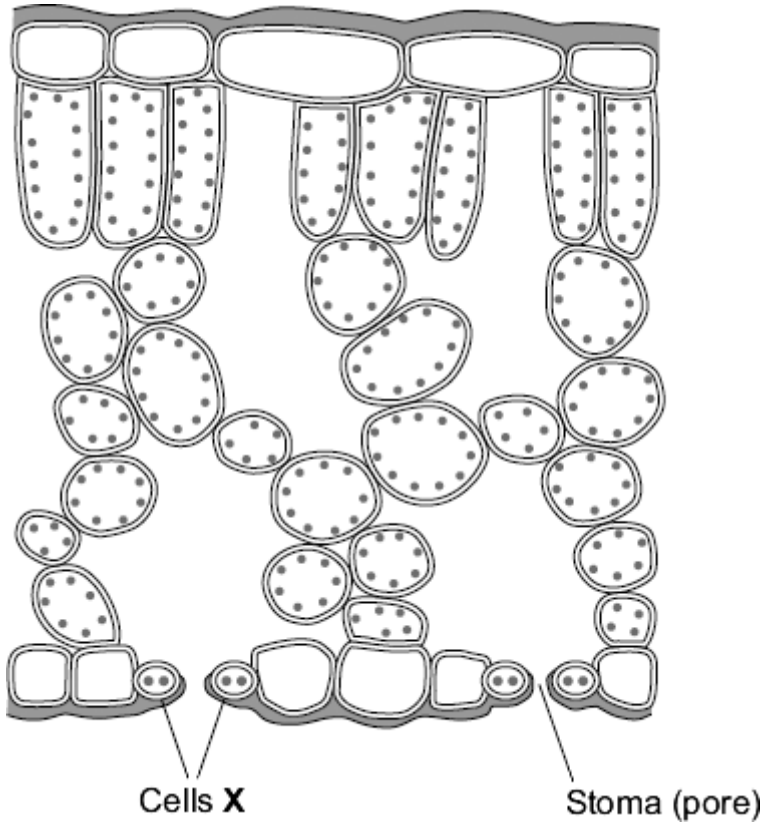
Practice Question Set For GCSE
Subject : Biology
Paper-1 Topic: B2 Organisation

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Name of the Student:_____
Max. Marks : 21 Marks **Time : 21 Minutes**

Q1.

The diagram shows a section through a plant leaf.



(a) The cells labelled **X** surround a stoma (pore).

Draw a ring around the correct answer to complete the sentence.

Cells **X** are called

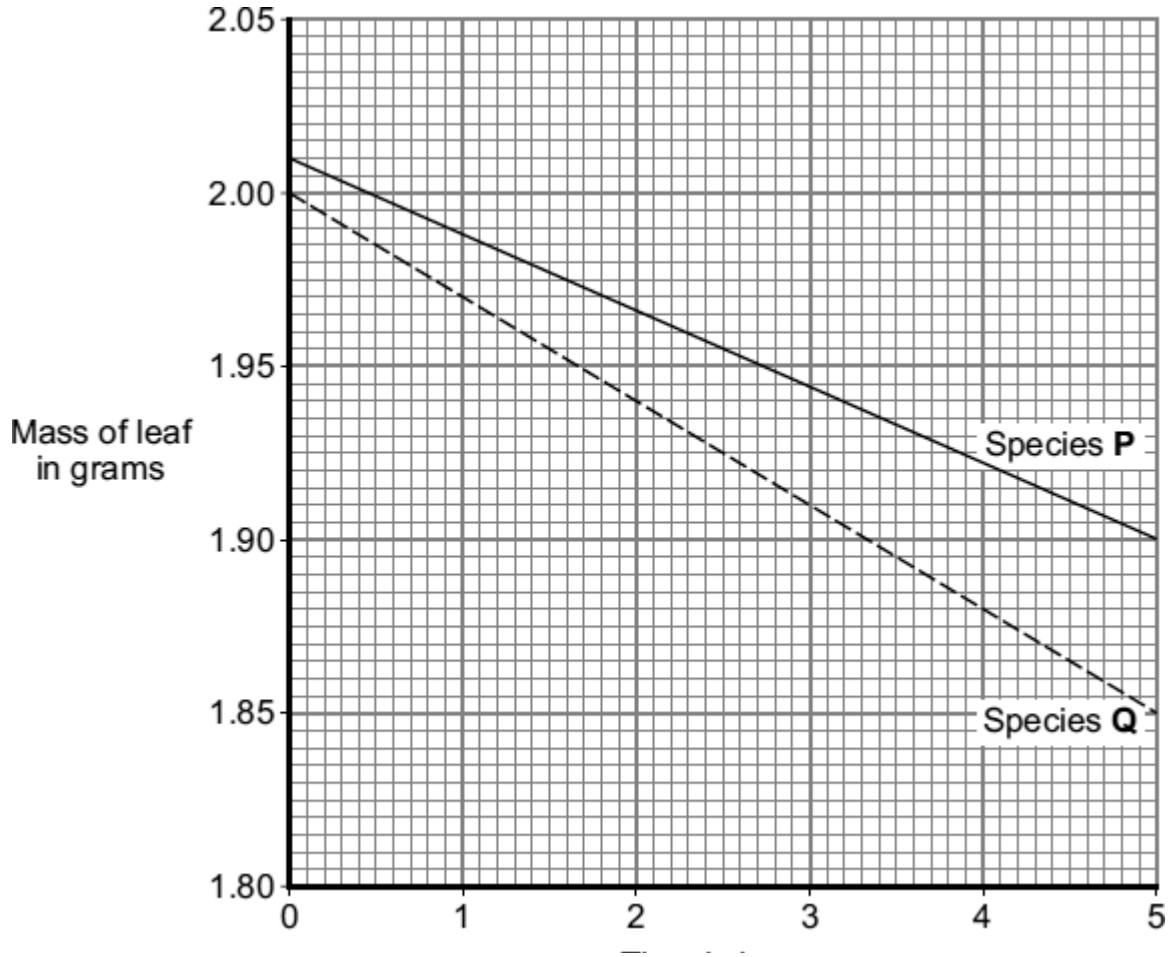
alveoli.
guard cells.
villi.

(1)

(b) Water vapour is lost from leaves. Water loss causes a leaf to lose mass.

The graph shows how the masses of leaves from two plant species, **P** and **Q**, changed over several hours. Both leaves were kept in the same conditions.

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(i) What was the mass of the leaf of species **Q** at 0 hours?

_____ grams

(1)

(ii) What was the difference between the mass of the leaf of species **P** and the mass of the leaf of species **Q** after 5 hours?

_____ grams

(1)

(iii) The leaf of species **Q** lost water at a faster rate than the leaf of species **P**.

Suggest **one** reason why.

_____

_____

(1)

(iv) Which weather conditions would cause the greatest rate of loss of mass for both species **P** and species **Q**?

Tick (✓) **one** box in the table.

Weather conditions		**Tick (✓)**
Still air or wind	**Temperature**	

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	in °C	
Wind	30	
Still air	30	
Wind	20	

(1)

(c) Draw a ring around the correct answer to complete the sentence.

In very hot, dry conditions, the stomata close.

This is to prevent

- anaerobic respiration.
- breathing.
- wilting.

(1)

(Total 6 marks)

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Q2.

A group of pupils investigated the digestion of fat by the enzyme lipase.

(a) What **two** substances are produced when fats are digested?

Tick (✓) **two** box.

Glucose ☐

Fatty acids ☐

Glycerol ☐

Amino acids ☐

(2)

In the investigation:

- the pupils set up five test tubes
- each tube contained 1 cm^3 of fat and 10 cm^3 of lipase solution
- each tube was kept at a different temperature for 24 hours.

(b) (i) Give **one** control variable in this investigation.

_____

(1)

(ii) What was the independent variable being investigated?

_____

(1)

(c) The pH of the solution in each tube was tested at the beginning of the investigation and after 24 hours.

The results of the pupils' investigation are shown in the table.

Tube	Temperature in °C	pH at the beginning	pH after 24 hours
1	0	Neutral	Neutral
2	20	Neutral	'Weak' acid
3	40	Neutral	'Strong' acid
4	60	Neutral	'Weak' acid
5	80	Neutral	Neutral

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One pupil said, “We might **not** have found the best temperature for the lipase to work”.

What more could they do to find the best temperature?

_____

_____

_____

_____

_____

(2)

(d) The pupils then placed **Tube 1** into a water-bath kept at 40 °C.
The tube was left in the water-bath for 24 hours.

(i) What pH would you expect the contents of the tube to be after the extra 24 hours?

Tick (✓) **one** box.

(1)

(ii) Give the reason for your answer.

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_____

_____

(1)

(Total 8 marks)

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Q3.

The body uses enzymes to digest (break down) large food molecules into smaller molecules.

(a) (i) Draw **one** line from **each** large food molecule to the enzyme that acts on it.

Large food molecule	**Enzyme**
starch	amylase
fat	protease
protein	lipase
	isomerase

(3)

(ii) Draw a ring around the correct answer to complete each sentence.

Starch is broken down into

amino acids.

fatty acids and glycerol.

sugars.

Fat is broken down into

amino acids.

fatty acids and glycerol.

fructose.

Protein is broken down into

amino acids.

fructose.

sugars.

(3)

(b) Bile helps digestion.

Where is bile produced?

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Draw a ring around **one** answer.

liver **mouth** **stomach**

(1)

(Total 7 marks)

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