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

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Name of the Student:_____
Max. Marks : 19 Marks **Time : 19 Minutes**

Q1.

Water is lost from the leaves of plants through pores called stomata.

(a) What is the loss of water from a leaf called?

Tick (✓) **one** box.

Osmosis ☐

Respiration ☐

Transpiration ☐

(1)

(b) Which cells control the size of stomata?

Tick (✓) **one** box.

Guard cells ☐

Phloem cells ☐

Xylem cells ☐

(1)

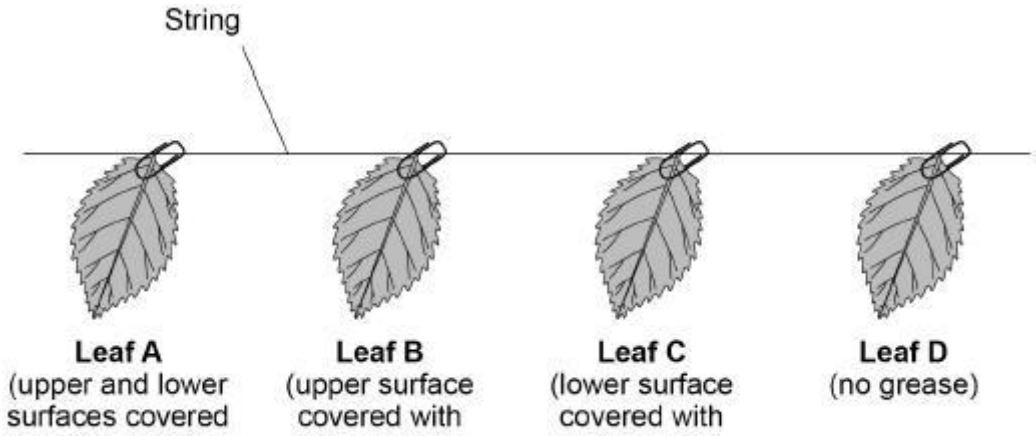
A student investigated the water loss when different surfaces of leaves were covered in grease.

The grease blocks the stomata.

This is the method used.

1. Remove four similar leaves from one plant.
2. Put grease on different surfaces of the leaves as shown in the diagram below.
3. Record the mass of each leaf and attach the four leaves to a string.
4. After 24 hours record the mass of each leaf again.

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The table below shows the results.

Leaf	Surfaces covered with grease	Mass of leaf at start in grams	Mass of leaf after 24 hours in grams	Loss in mass after 24 hours in grams
A	Upper and lower	2.01	1.97	**X**
B	Only upper	2.00	1.87	0.13
C	Only lower	2.01	1.96	0.05
D	None	1.98	1.83	0.15

(c) Calculate value **X** in the table above.

_____

_____

Value **X** = _____ g

(1)

(d) The loss in mass of water was measured after 24 hours.

Calculate the mass of water lost in grams per hour for leaf **D**.

_____

_____

_____

Mass of water lost per hour = _____ g

(2)

The student concluded:

'More water is lost from the lower surface of a leaf than from the upper surface.'

(e) What evidence is there in the table above to support the student's conclusion?

_____

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_____

(1)

(f) What do the results in the table above show about the number of stomata on the surfaces of a leaf?

Tick (✓) **one** box.

There are more stomata on the lower surface.	☐
There are more stomata on the upper surface.	☐
There are the same number of stomata on both surfaces.	☐

(1)

(g) The investigation was done at 20 °C

How would the mass of water lost be different if the investigation was done at 25 °C?

Give a reason for your answer.

Difference _____

_____

Reason _____

_____

(2)

(Total 9 marks)

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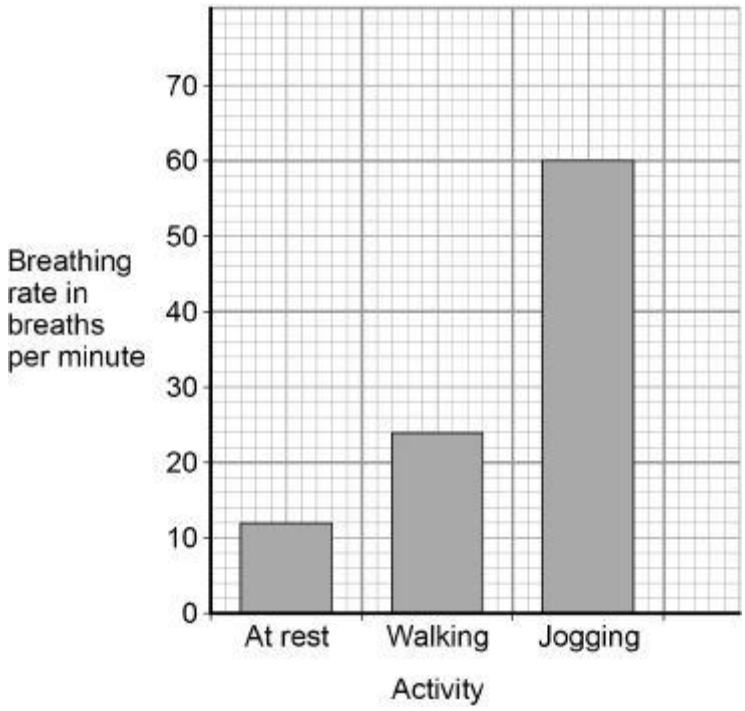
Q2.

Exercise can improve health.

A student measured her breathing rate at rest, when walking and when jogging.

Figure 1 shows her results.

Figure 1



(a) Compare the breathing rates when doing the **three** different activities.

Use values from **Figure 1** in your answer.

_____

_____

_____

_____

_____

_____

(3)

(b) Explain why the breathing rate changes when doing different activities.

_____

_____

_____

_____

_____

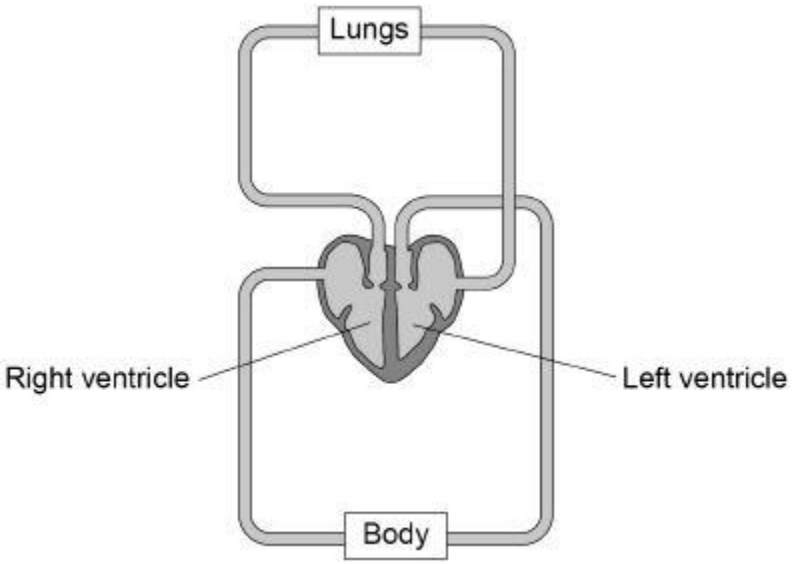
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_____

(3)

Figure 2 shows the heart in the circulatory system.

Figure 2



(c) The heart is a double pump.

Describe what this means.

Use **Figure 2** to help you.

_____

_____

_____

_____

(2)

(d) The wall of the left ventricle is much thicker than the wall of the right ventricle.

Suggest **one** reason for this.

_____

_____

_____

(1)

(e) People are encouraged to exercise after recovering from a heart attack.

Suggest **one** reason why.

_____

_____

(1)

(Total 10 marks)

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