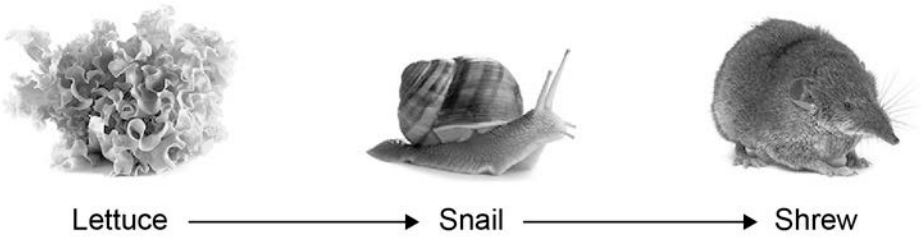
0 2 **Figure 3** shows a food chain in a garden.

Figure 3



0 2 . 1 Name **one consumer** shown in **Figure 3**.

[1 mark]

0 2 . 2 Name **one carnivore** shown in **Figure 3**.

[1 mark]

0 2 . 3 A disease kills most of the shrews in the garden.

Suggest why the number of snails in the garden may then increase.

[1 mark]

0 2 . 4 What is the name given to all the snails in the garden shown in **Figure 3**?

[1 mark]

Tick **one** box.

Community ☐

Ecosystem ☐

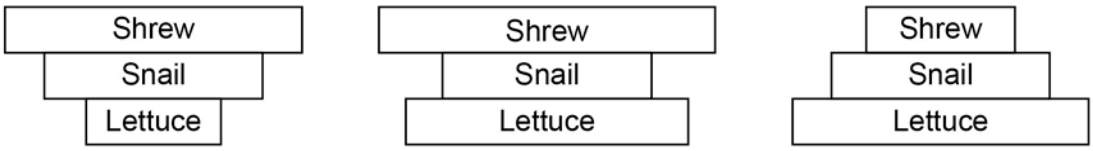
Population ☐

Territory ☐

0 2 . 5 Which pyramid of biomass is correct for the food chain shown in **Figure 3**?

[1 mark]

Tick **one** box.



A ☐ **B** ☐ **C** ☐

0 2 . 6 Some snails ate some lettuces.

The lettuces contained 11 000 kJ of energy.

Only 10% of this energy was transferred to the snails.

Calculate the energy transferred to the snails from the lettuces.

[1 mark]

Energy = _____ kJ

Question 2 continues on the next page

0 2 . 7 Give **one** reason why only 10% of the energy in the lettuces is transferred to the snails.

[1 mark]

Tick **one** box.

- The lettuces carry out photosynthesis ☐
- The snails do not eat the roots of the lettuces ☐
- Not all parts of a snail can be eaten ☐

0 2 . 8 **Abiotic** factors can affect the food chain.

Wind direction is one abiotic factor.

Name **one other** abiotic factor.

[1 mark]

Question 2

Question	Answers	Extra information	Mark	AO / Spec. Ref.
02.1	snail **or** shrew	additional incorrect answer negates correct answer	1	AO2/1 4.7.2.1 4.7.4.1
02.2	shrew	additional incorrect answer negates correct answer	1	AO2/1 4.7.2.1 4.7.4.1
02.3	fewer shrews to eat them		1	AO2/1 4.7.4.1
02.4	population		1	AO1/1 4.7.1.1
02.5	**C**		1	AO3/2a 4.7.4.2
02.6	(11 000 × 0.1 =) 1 100 (kJ)		1	AO2/2 4.7.4.3
02.7	the snails do not eat the roots of the lettuces		1	AO2/1 4.7.4.3
02.8	any **one** from: • light (intensity) • temperature • moisture (levels) • soil pH • mineral / ion content (of soil) • wind intensity / speed • carbon dioxide (levels) • oxygen (levels)	ignore wind direction	1	AO1/1 4.7.1.2
Total			**8**	