

N5 Biology LE1 Ecosystems Homework

[graph paper needed]

1

The total variety of all living things on Earth is described as

- A an ecosystem
- B biodiversity
- C a population
- D competition.

2

Which of the following statements about a woodland describes a community?

- A All the oak trees
- B All the plants
- C All the oak trees and blackbirds
- D All the plants and animals

3 Which statement about food chains is TRUE?

- A begins with a consumer
- B prey eat predators
- C the arrows show the direction of energy flow
- D omnivores eat plants only

[3]

4 Draw a food web using the following information

a. Phytoplankton are microscopic, photosynthesising organisms that live in water, in the ocean zooplankton and krill eat them. Zooplankton are eaten by artic cod. Artic cod, leopard seals and penguins eat krill. Artic cod are the prey of leopard seals and Orca. Orca also feed on leopard seals.

[3]

b. This food web is affected by an environmental change causing the size of the krill population to decrease to a very low level.

i) Select an organism that would **increase** in population and explain why.

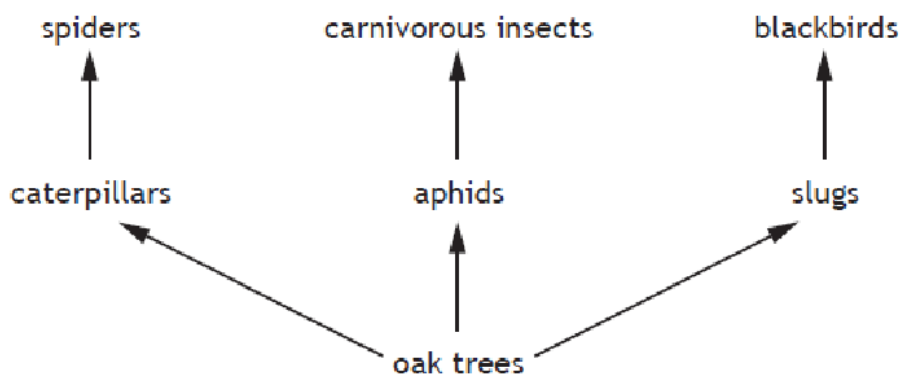
[2]

ii) Select an organism that would **decrease** in population and explain why.

[2]

5

The diagram below shows part of a food web in an oak woodland.



The use of insecticides in a nearby field resulted in the death of most aphids and caterpillars.

Which line in the table identifies the effect on the numbers of slugs and carnivorous insects?

	<i>Number of slugs</i>	<i>Number of carnivorous insects</i>
A	decreases	stays the same
B	increases	decreases
C	decreases	increases
D	increases	stays the same

[1]

6

A rabbit feeds on grass, is eaten by foxes and is a habitat for fleas.

The statement above describes the rabbit's

- A ecosystem
- B community
- C niche
- D prey.

[1]

7

Which of the following describes interspecific competition?

- A Individuals of different species requiring different resources.
- B Individuals of different species requiring similar resources.
- C Individuals of the same species requiring different resources.
- D Individuals of the same species requiring similar resources.

[1]

8 In which of the following would competition not occur?

- A Rabbits grazing in a field
- B Owls and foxes hunting for mice
- C Daisies and dandelions growing in a lawn
- D Algae and fish in a loch

[1]

9

The table shows the number of pilot whales caught in the Faroe islands between 1994 and 2000.

<i>Year</i>	<i>Number of pilot whales caught</i>
1994	1200
1995	228
1996	1500
1997	1170
1998	820
1999	610
2000	580

- a) Construct a **bar graph** of the results given from **1996** to **2000**. [HINT start the y axis scale at 500] [3]
- b) Describe the trend shown by the results in the table from 1996 to 2000. [1]
- c) Calculate the average yearly pilot whale catch from 1996 to 2000. [1]
- d) Calculate how many times greater the whale catch in 1996 was compared to 1994. [1]

Total = 20 marks
