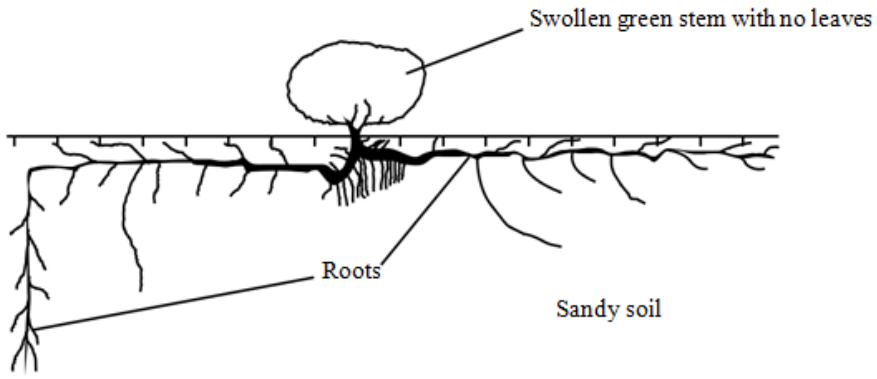
Competition and Adaptation 3

Q:1 The drawing shows a bean caper plant.



The bean caper plant lives in hot desert conditions.

Explain two ways in which the bean caper is adapted for life in a hot desert.

Adaptation 1 _____

_____

How this adaptation helps the bean caper to survive

_____

_____

Adaptation 2 _____

_____

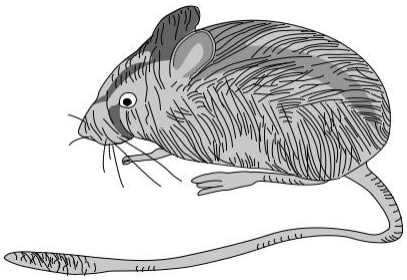
How this adaptation helps the bean caper to survive

_____

_____

(4 marks)

Q:2 The drawing shows a kangaroo rat. This rat lives in hot, dry deserts.



(a) Explain how each of the following features helps the kangaroo rat to survive in a hot, dry desert.

(a)(i) It does not produce urine.

_____

_____

(1 mark)

(a)(ii) It lives in a burrow during the day, but comes out at night to search for food.

_____

_____

(1 mark)

(a)(iii) Its feet and its tail each have a large surface area.

_____

_____

(1 mark)

(b) The kangaroo rat does not sweat.

Explain why not sweating could be dangerous for the animal.

_____

_____

(1 mark)

Q:3 Organisms have adaptations that enable them to survive in extreme conditions.

(a) The photograph shows an arctic fox.

This fox lives in the arctic, where it is very cold.

Suggest two ways in which the arctic fox is adapted for life in very cold conditions.

Explain how each adaptation helps the arctic fox to survive in very cold conditions.

Adaptation 1 _____

_____

How this adaptation helps the arctic fox to survive in very cold conditions.

_____

_____

_____

Adaptation 2 _____

_____

How this adaptation helps the arctic fox to survive in very cold conditions.

_____

_____

_____

(4 marks)

(b) The photograph shows an antelope that lives in a sandy desert.

The antelope is prey to large cats such as cheetah.

Suggest two adaptations that help this antelope to avoid being killed by predators.

Explain how each adaptation helps the antelope to avoid being killed by predators.

Adaptation 1 _____

_____

How this adaptation helps the antelope to avoid being killed by predators.

_____

_____

_____

Adaptation 2 _____

_____

How this adaptation helps the antelope to avoid being killed by predators.

_____

_____

_____ **(4 marks)**

Q:4 Swallows and swifts migrate between Britain and South Africa every year.

(a) Photograph 1 shows a swallow.

Photograph 1

Swallows can fly very quickly.

Use information from the photograph to give one way in which the swallow is adapted for flying very quickly.

_____

_____

(1 mark)

(b) Photograph 2 shows swifts.

Photograph 2

Swallows and swifts both feed on flying insects.

They both spend the summer in Britain and then migrate to South Africa in the autumn.

Suggest one reason why swallows and swifts do not stay in Britain in the winter.

_____

_____

(1 mark)

(c) The table gives data about swallows and swifts.

	Swallows	**Swifts**
Arrival date in Britain	April	Early May
Leaving date from Britain	October	Early August
Food	Flying insects	Flying insects
Height at which the birds feed	Near ground level	Up to 350 m above ground level
Times at which birds feed	Mainly when it is light	Almost 24 hours per day

(c)(i) There is very little competition between swallows and swifts for food.

Use information from the table to suggest two reasons for this.

1 _____

_____

2 _____

_____

(2 marks)

(c)(ii) Swallows and swifts do compete for some factors.

Suggest one of these factors.

_____

_____

(1 mark)

Q:5 The photograph shows an aardvark.

 ??? Aardvarks feed on insects that they dig from the soil.

 ??? Aardvarks hunt for these insects at night.

How does each of these adaptations help the aardvark?

(a) It has powerful claws.

_____

_____

(1 mark)

(b) It has a long, sticky tongue.

_____

_____

(1 mark)

(c) It has very large ears.

_____

_____

(1 mark)

(d) It can cover the end of its nose with flaps of skin.

_____

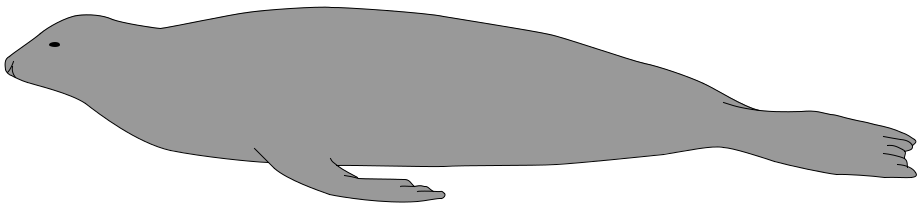
_____

(1 mark)

Q:6 Seals are adapted for life in the sea.

Use information from the drawings to answer the questions. This drawing shows seal X.

Seal X



(a) Give two ways in which seal X is adapted for swimming.

1 _____

_____

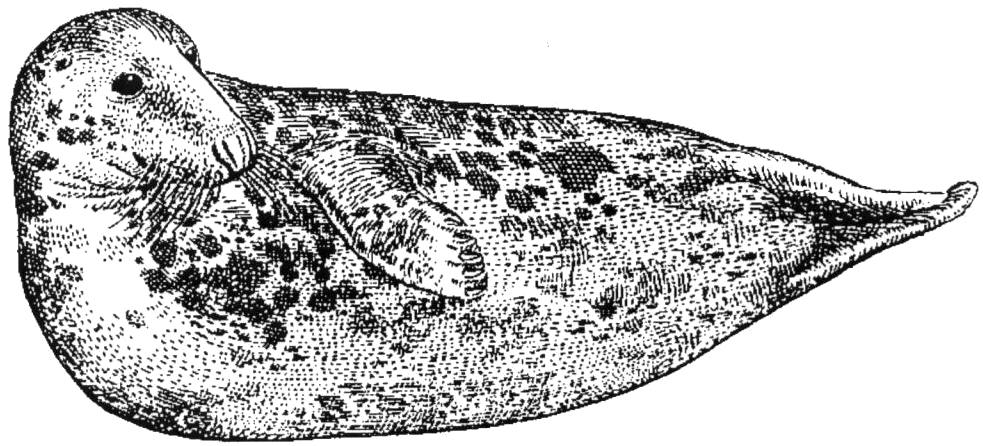
2 _____

_____

(2 marks)

(b) This drawing shows seal Y, drawn to the same scale as seal X.

Seal Y



Seal Y lives in much colder seas than seal X.

Explain one way in which seal Y is adapted for surviving in cold seas.

_____

_____

_____

_____

(2 marks)

Q:7 An animal's feet are adapted to the animal's way of life. The photographs show the feet of four different animals.

Draw a line from each photograph of feet to the correct adaptation.

Photograph	Adaptation
	Running very fast
	Swimming
	Flying
	Catching and holding prey
	Supporting a very heavy body

(4 marks)

Q:8 Animals in a habitat compete with each other.

(a) Give two factors for which animals may compete.

1 _____

2 _____

(2 marks)

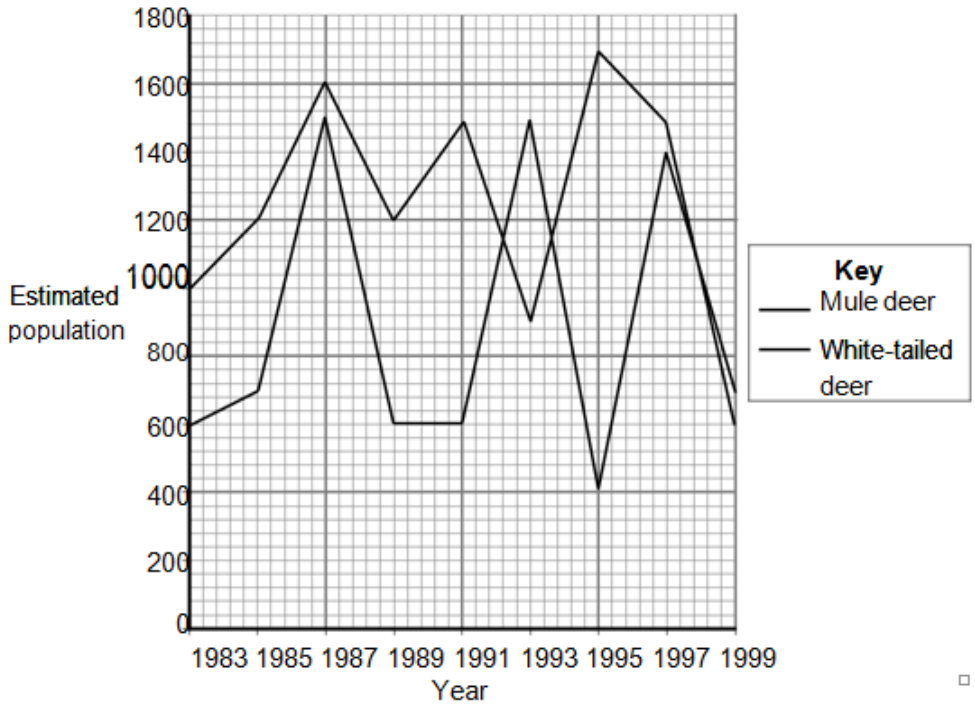
(b) The photographs show a mule deer and a white-tailed deer.

Mule deer

White-tailed deer

Mule deer and white-tailed deer live together in the same national park in the USA.

The graph shows changes in the populations of the two deer species between 1983 and 1999.



(b) (i) Describe the changes in the population of white-tailed deer between 1991 and 1995.

_____

_____

_____

_____

(2 marks)

(b) (ii) Use information from the graph to suggest an explanation for changes in the population of white-tailed deer between 1991 and 1995.

_____

_____

_____

_____

(2 marks)

TOTAL MARKS=