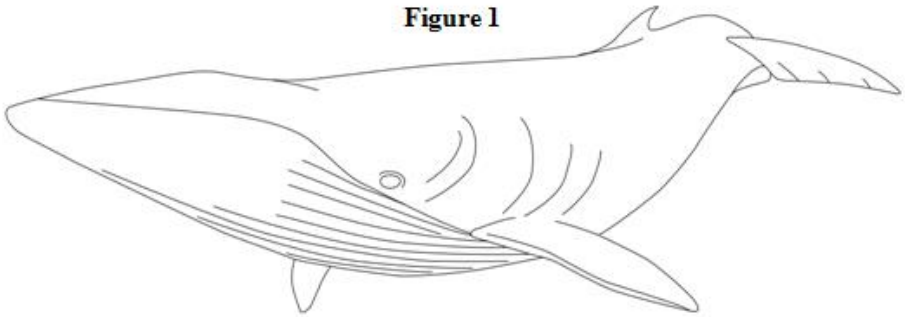
Competition and Adaptation

Q:1(a) Figure 1 shows a minke whale. Whales live in the sea.

Figure 1



Write down two ways in which the body of the whale is adapted for swimming.

1 _____

_____

2 _____

_____

(2 marks)

(b) Figure 2 shows the skeleton of a minke whale.

Figure 2

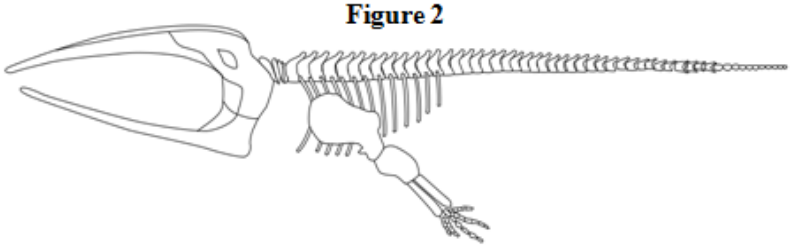
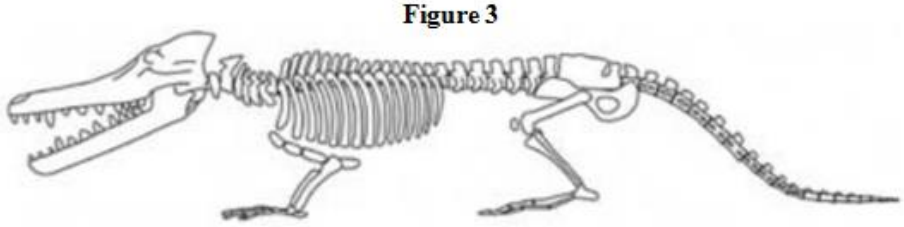


Figure 3 shows the fossil skeleton of an extinct whale.

Figure 3



(i) Apart from size, give two differences between the skeleton of the minke whale and the fossil skeleton of the extinct whale.

1 _____

_____

2 _____

_____

(2 marks)

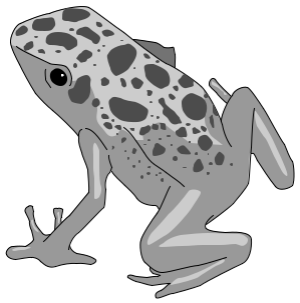
(ii) In each of the sentences below, draw a ring around the correct answer.

Life on Earth first developed more than three | billion / million / thousand | years ago.

Fossils | disprove / give evidence / prove | for the theory of evolution.

(2 marks)

Q:2 The drawing shows a poison-dart frog.



(a) The poison-dart frog moves mainly by jumping.

Use information from the drawing to suggest one way in which this frog is adapted for jumping.

_____

_____

(1 mark)

(b) Use the information below to suggest how the poison-dart frog is adapted for survival. This poison-dart frog is bright blue in colour.

Animals that eat poison-dart frogs become very sick.

_____

_____

(1 mark)

(c) There are over five thousand species of frogs in the world. One third of these species are threatened with extinction.

(i) Suggest two reasons why many species of frogs are now threatened with extinction.

1 _____

_____

2 _____

_____

(2 marks)

(ii) It is important that we do not allow species of frogs to become extinct. Suggest one reason why.

_____

_____

(1 mark)

Q:3 The photograph shows a sand gazelle.

The sand gazelle lives in the Arabian Desert where temperatures often reach 45 °C.

(a) The sand gazelle feeds only at dawn and at dusk. At other times it stays in the shade. Suggest how this helps the animal to conserve water.

_____

_____

_____

_____

(2 marks)

(b) During the dry season, the sand gazelle's liver and heart shrink in size. This reduces the amount of oxygen that the body needs.

Suggest how needing less oxygen helps the animal to conserve water.

(2 marks)

Q:4 Animals have adaptations that enable them to survive.

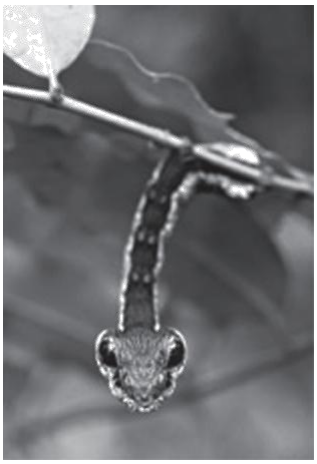
(a) The photograph shows an echidna.

The echidna has pointed spines on its back.

Explain how these spines might help the echidna to survive.

(2 marks)

(b) The photograph shows a caterpillar.



Explain how the caterpillar's appearance might help it to survive.

_____

_____

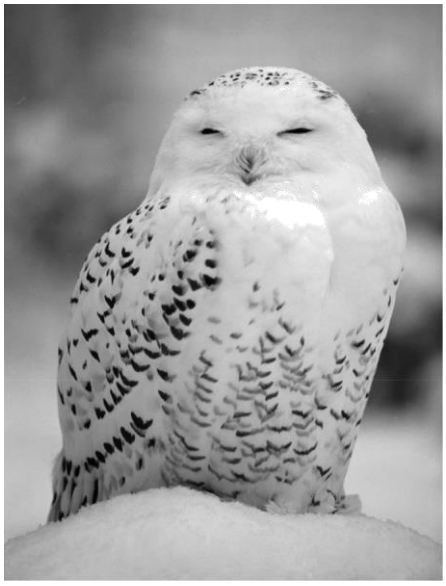
_____

_____

_____

(2 marks)

Q:5 The photograph shows a snowy owl.



- The snowy owl lives in the Arctic.
- It eats small mammals such as mice.

How does each of the following adaptations help the snowy owl to survive?

(a) Its feathers are white.

_____

_____

(1 mark)

(b) It has a thick covering of feathers.

_____

_____

(1 mark)

(c) It makes no sound when it flies.

_____

_____

(1 mark)

(d) It has long, sharp claws.

_____

_____

(1 mark)

Q:6 The photograph shows a musk ox.

The musk ox lives in the Arctic. An adult musk ox is 2.5 m long and 1.4 m high at the shoulder. Adults usually have a mass of about 400 kg.

Use this information and information from the photograph to explain two ways in which a musk ox is adapted for survival in the Arctic.

(a)(i) Adaptation 1 _____

(1 mark)

(a)(ii) How this adaptation helps the musk ox to survive in the Arctic.

_____

_____

(1 mark)

(b)(i) Adaptation 2 ._____

(1 mark)

(b)(ii) How this adaptation helps the musk ox to survive in the Arctic.

_____

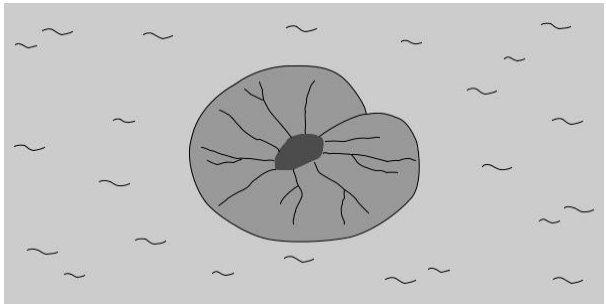
_____

(1 mark)

Q:7 Plants are adapted for survival in many different ways.

Use information from the drawings to answer each question.

(a) This plant lives in ponds. The leaves of the plant float on the surface of the water.



The leaf of this plant is adapted for floating on water.

Suggest how.

_____

_____

(1 mark)

(b) This plant lives in areas where a lot of snow falls.

The triangular shape helps the tree to survive in snowy conditions.

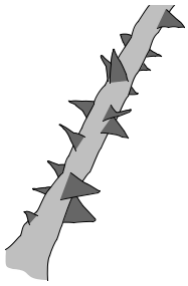
Suggest how.

_____

_____

(1 mark)

(c) This plant has sharp thorns on the stem.



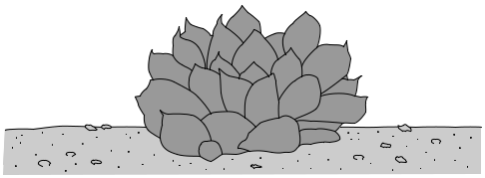
Thorns help this plant survive. Suggest how.

_____

_____

(1 mark)

(d) This plant lives in very dry areas.



The swollen leaves help this plant to survive in very dry places.

Suggest how.

_____

_____

(1 mark)

TOTAL MARKS=31