

Topic : Identifying Species-Classifying Vertebrates Set-1

1

(a) Mammals are vertebrates. State **two** characteristic visible features of mammals that distinguish them from all other classes of vertebrates.

1 [2]

2 [2]

MARK SCHEME:

**(a) hair / fur ;
mammary glands ;
different types of teeth ;
pinnae / ear flaps ; [max 2]**

2 Fig. 1.1 shows five animals that live in Australia.



echidna



kultarr



fruit bat



wallaby



quoll

Fig. 1.1

State **one** feature, visible in the diagrams, which indicates that all of these animals are mammals.

.....[1]

MARK SCHEME:

hair / fur ; 1

www.smartexamresources.com

- 3 Big-horn sheep live on rocky mountain sides in Canada. The males have very large horns. The size of their horns is caused by their genes.



(a) State **one** feature shown in the photograph that is found only in mammals.

..... [1]

MARK SCHEME:

(a) hair / fur ; [1]

www.smartexamresources.com

4

Guanacos are relatives of camels and live in the Andes mountains in South America. They feed on grasses and other plants. They are hunted by pumas, and young guanacos may be killed by foxes.

Fig. 1.1 shows a guanaco.



Fig. 1.1

(a) (i) State **one** feature, visible on Fig. 1.1, that indicates that guanacos are mammals.

..... [1]

MARK SCHEME:

(a) (i) hair/fur; [1]

www.smartexamresources.com

5

Humans, like all mammals, use internal fertilisation, whereas fish use external fertilisation.

(i) Explain what is meant by *external fertilisation*.

.....
.....
..... [2]

(ii) Explain why external fertilisation is used only by animals that reproduce in water.

.....
..... [1]

(iii) Mammals produce only a few eggs at a time, whereas fish produce thousands. Suggest why.

.....
.....
..... [2]

MARK SCHEME:

(i) fusion of, sperm and egg / male and female gamete / male and female nucleus ;

outside the (female's) body / after the eggs are laid / in the water ; [2]

(ii) sperm, could not survive in air / need liquid to swim in ; [1]

**(iii) external fertilisation, less efficient than internal / many eggs not fertilised ;
eggs develop outside body with external fertilisation so not protected /
fewer embryos survive ; [2]**

6

(a) Mammals are vertebrates. State **two** characteristic visible features of mammals that distinguish them from all other classes of vertebrates.

1

2 [2]

MARK SCHEME:

**(a) hair / fur ;
mammary glands ;
different types of teeth ;
pinnae / ear flaps ; [max 2]**

7

Cichlid fish live in lakes in east Africa. Fig. 5.1 shows a cichlid fish.

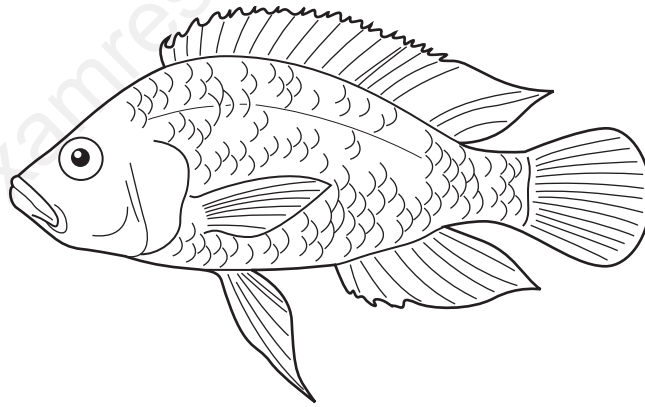


Fig. 5.1

(a) State **two** features, visible on Fig. 5.1, which are characteristic of fish.

- 1
- 2 [1]

(b) Most fish have external fertilisation.

(i) Explain what is meant by *external fertilisation*.

.....
..... [2]

(ii) Explain why animals that live entirely on land cannot use external fertilisation.

.....
..... [1]

MARK SCHEME:

(a) any two of: scales/fins /operculum ; [1]

(b) (i) joining of male and female, gamete/ sex cells /nuclei ;
outside the female's body ; [2]

(ii) sperm/male gamete/male sex cell, would not be able to swim ;

OR

gametes / sex cells /eggs / sperm/ zygote, would dry out ; [max 1]