



Name _____ Class _____ Roll no. _____ Date _____ Marks _____ / 33

1 Key words**[4]**

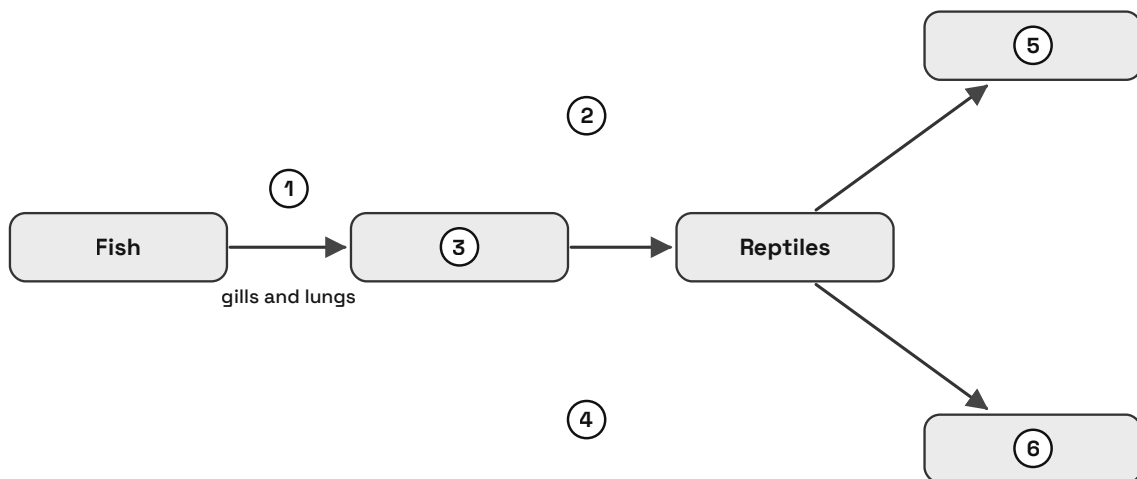
Fill in the blanks with words from the box. Two words in the box are not needed. Each blank carries 0.5 mark.

acquired analogous connecting links embryos fossils homologous mutagen
paleontology sedimentary vestigial

The remains or traces of organisms that lived long ago, preserved in rocks, are called _____, and their study is called _____. They are found in _____ rocks. Organs with the same basic structure and origin but different jobs are _____ organs, while organs that do the same job but have a different structure are _____ organs. Organs that are small and do little or nothing now, like the human appendix, are _____ organs. Animals such as the platypus, which have features of two different groups, are called _____. Something that causes mutations, such as X-rays, is called a _____.

2 Label the diagram**[3]**

The diagram shows the connecting links between the classes of vertebrates. Write the names of the classes and animals numbered 1 to 6. Each carries 0.5 mark.



1. _____

2. _____

3. _____

4. _____

5. _____

6. _____



[5]

Choose the correct option for each of the following questions.

- i. Who founded the theory of natural selection? [1]
 - a. Charles Darwin
 - b. Lamarck
 - c. Hugo de Vries
 - d. Johann Gregor Mendel
- ii. In which rocks are fossils found? [1]
 - a. sedimentary
 - b. igneous
 - c. metamorphic
 - d. volcanic
- iii. Which of these is an example of homologous organs? [1]
 - a. our hand and the foreleg of a horse
 - b. our hand and an elephant's tusk
 - c. our ear and a rabbit's ear
 - d. the canine teeth of humans and dogs
- iv. In Darwin's theory, why do giraffes today have long necks? [1]
 - a. each giraffe stretched its neck and passed the longer neck to its young
 - b. giraffes with slightly longer necks survived hard times better and passed this variation on
 - c. giraffes decided to grow long necks
 - d. a mutation made one giraffe suddenly grow a very long neck
- v. A bird's wing and a bat's wing are analogous as wings. But as forelimbs, they are: [1]
 - a. homologous: both are built on the same bone plan
 - b. analogous: they do the same job
 - c. vestigial: they are useless
 - d. neither

[3]

Write very short answers to the following questions.

- a. Name the connecting link between reptiles and birds. [1]

- b. Which method is used to find the age of remains up to about 50,000 years old? [1]

- c. A wrestler has very strong muscles. Will his children be born with them? [1]

[8]

Write short answers to the following questions.

- a. Give a reason: fossils are taken as strong evidence of evolution. [2]



- b. Give a reason: organisms produce a huge number of young, yet their populations do not keep increasing. [2]

- c. Write any two differences between homologous and analogous organs. [2]

- d. Write any four properties of mutation. [2]

6 Long answers [8]

Write long answers to the following questions.

- a. Describe Darwin's theory of evolution. [4]

- b. What are the evidences of evolution? Describe any four, with examples. [4]



7 Think

[2]

Think, then answer.

A doctor tells you to finish the whole course of an antibiotic, even after you feel better. Use the idea of natural selection to explain why.

8 Activity: Variation in your family (Activity 4.1)

(not marked)

Talk with your family about the features of your parents, grandparents and yourself, and fill in the table.

Feature	Who has it in your family	Inherited or acquired?
height		
curly or straight hair		
a scar, or a skill such as swimming		
any unusual feature (six fingers, a white patch of hair)		

Which of these features could be passed on to your own children? Why?

