



Subject: Grade 5 Natural Sciences

Topic: Natural Sciences: Term 1 - Mini-exam

Total: 65 Marks

1. 5 | a tadpole

4 marks

Explanation:

Number 4 shows the eggs that the female has laid in the water. The male frog will spread his sperm over the eggs in the water to fertilise them. Once fertilisation has taken place, an embryo will form, at **number 5**. A **tadpole** hatches from the embryo.

2. C: dead

4 marks

Explanation:

Dead plants and animals are changed into nutrients by decomposers, such as dung beetles and earthworms. These nutrients make the soil more fertile.

3. tendons | ligaments

4 marks

Explanation:

The **skeleton** consists of **bones**, connected to each other by **ligaments**. In order for the **bones** to move, **muscles** are **connected** to them with **tendons**.

4. plates

3 marks

Explanation:

The **plates** of the **exoskeleton** forms a **hard shell**. However, this shell is **soft** and **thin** where the **body** of the **invertebrate** needs to **bend**.

5. C: A and C

4 marks

Explanation:

Muscles **A** and **C** are **tightened** in order for the body to be in this position. The **muscles work in pairs**; while **A** and **C** are **tightened**, **B** and **D** are **relaxed**.



6. false

2 marks

Explanation:

There are **three joints** that enable a person to **run or walk**:

- Hip joint
- Knee joint
- Ankle joint

If these were **rigid** (stiff) points, you would **not be able to move your legs forwards and backwards, bend your legs or move your feet**.

7. six months | 6 months | 6 mo

3 marks

Explanation:

Chicks are fully grown within **six months**. Female chicks grow up to be hens, and male chicks grow up to be roosters.

8. false

2 marks

Explanation:

Internal fertilisation refers to the sperm being placed **inside** the female's body, where the egg is fertilised.

External fertilisation occurs in the water, where the egg is fertilised *outside* the female's body.

9. outside | outside of

3 marks

Explanation:

External fertilisation occurs when eggs are fertilised outside the mother's body. For example, eggs are laid in water and then the father spreads his sperm over the eggs.

10. A: 4; 2; 6; 3; 1; 5

4 marks

Explanation:

After mating, the female is pregnant. After pregnancy, the female will give birth to her young and feed them with milk. The kittens will continue feeding from the mother until they are mature, after which they can repeat the cycle by mating.

11. reptile | they all have a hard internal skeleton or backbone

4 marks

Explanation:

Mammals, fish, amphibians and reptiles are all vertebrates.
Most of these animals have legs, but snakes and fish do not have a legs.

12. spinal cord

3 marks

Explanation:

The spinal cord connects the brain with the rest of the body. If the spinal cord is damaged, the brain cannot send signals to the legs to walk. You are then considered 'paralysed'.

13. cannot | moult | exoskeleton

6 marks

Explanation:

A **spider** has an **exoskeleton** that **cannot grow**. This means the spider needs to **moult**, which is the **process** whereby the **exoskeleton** is **replaced** by a new one.

14. C: It is a reptile with a skeleton.

4 marks

Explanation:

A **chameleon** is a **vertebrate** and a **reptile** which can **change** its **colour**.

15. true

2 marks

Explanation:

The shoulder girdle is also called the pectoral girdle. It consists of three bones: the collarbone (clavicle), the shoulder blade (scapula) and the upper arm bone (humerus).

16. warm | hatch

4 marks

Explanation:

Birds sit on their eggs to keep them warm so that the embryo can develop. When the baby bird is ready to hatch, it cracks through the shell. They stay in the nest for a few weeks, being fed and protected by the parent birds.

17. false

2 marks

Explanation:

Lions and wild cats are mammals which are also predators because they have to hunt for food. Elephants and giraffes are mammals but not predators because they eat plants and don't hunt for food.

18. joint | joints

3 marks

Explanation:

There are different kinds of **joints** that allow for **different kinds** of **movement**. The **hip joint** is a **ball-and-socket joint**, while the **knee joint** and the **elbow joint** is as a **hinge joint**.

19. C: B, C and E

4 marks

Explanation:

The frog, cat and kangaroo have limbs.

A frog's two front legs have four toes each, while the back legs have five toes each.

Unlike most mammals, when cats walk, they use a "pacing" gait; that is, they move the two legs on one side of the body before the legs on the other side. This trait is shared with camels and giraffes.

The kangaroo has a third leg masquerading as a tail.

Total: 65 Marks