



Subject: Grade 9 Natural Sciences

Topic: Natural Sciences: Term 1 - Mini-Exam

Total: 95 Marks

1. true

3 marks

Explanation:

Micro means very small. Macro means very big.

Microscopic objects cannot be **seen** with the **naked eye**, they can only be seen with the help of the a microscope.

2. organelles

2 marks

Explanation:

The **components of a cell** that perform a specific function are **called organelles**, also known as the cell's organs.

3. nucleus | cell membrane | mitochondria

6 marks

Explanation:

1. The **nucleus** is found in almost all living plant and animals, it controls everything and contains all the genetic information of the cell.

2. The **cell membrane** surrounds or encloses the contents of the cell. It controls what goes into and out of the cell.

3. **Mitochondria** are small rod-shaped structures responsible for releasing energy from food during the process of respiration.

4. fallopian tubes | oestrogen | cervix

6 marks

Explanation:

The uterus is hollow with extremely strong muscular walls that can carry and protect a baby.

Two oviducts (Fallopian tubes) at the top of the uterus, connect it to the ovaries. There are two ovaries on either side of the uterus. They produce **oestrogen** and contain the ova.

The bottom neck of the uterus is called the **cervix**, which is tightly closed to protect the baby inside the uterus.

5. heart disease | heart attack | thrombosis | coronary heart disease

3 marks

Explanation:

Heart attacks occur when **blood vessels** carrying oxygenated blood to the **heart muscles** are blocked. This prevents the heart itself from getting food and oxygen and causes chest pains.



6. protection | support | movement

6 marks

Explanation:

The functions of the muscoskeletal system are:

1. To protect internal organs such as the heart, brain and liver by **providing a casing** around it.
2. To give **support and shape** to the body.
3. **Enables movement** to take place through the contraction and expansion of muscles and connective tissue.

7. C: A group of systems working together to perform a similar function.

4 marks

Explanation:

Many **cells form a tissue**, many **tissues form an organ**, many **organs form an organ system**.

8. umbilical cord

3 marks

Explanation:

The umbilical cord transports oxygen and nutrients to the baby from the placenta during pregnancy and also removes waste from the baby.

9. false

2 marks

Explanation:

Males are born with **both their two testes** hanging outside their bodies.

10. true

2 marks

Explanation:

The gaseous exchange occurs in the alveoli, the oxygen moves into the blood from the alveolus and carbon dioxide moves from the blood into the alveolus.

11. trachea

3 marks

Explanation:

The **trachea is ring-shaped cartilage** that **connects the throat to the lungs**.

12. Scurvy

3 marks

Explanation:

Scurvy is a disease that happens when a person **doesn't get enough vitamin C** from their diet. A person suffering from Scurvy may have some of these signs: lethargy, a rash on their legs and bleeding gums.

13. A: A

4 marks

Explanation:

There are **four different cells** namely **skin** cells (A), **muscle** cells (B), **nerve** cells (C) and **red blood** cells (D).

Skin cells cover the surface of the body and protect the organs inside.

14. true

2 marks

Explanation:

The **left** ventricular walls have **thick** muscles to create sufficient pressure to pump blood to the rest of the body.

The **right** ventricular walls are **thin** as it doesn't need to pump blood very far, only to the lungs.

15. B: STD

4 marks

Explanation:

An STD is not a form of contraceptive. It is a sexually transmitted disease a person can get when having unprotected sexual intercourse with a person that has one.

16. D: Voice becomes deeper.

4 marks

Explanation:

During puberty the **larynx** (voicebox) **grows in males**, commonly known as an Adam's apple and is also the reason males have a deeper voice.

That same change does not happen in females.

17. C: D

4 marks

Explanation:

After swallowing, food goes to the stomach via the oesophagus where **chemical digestion** takes place.

The small bits of **food are mixed with enzymes** and hydrochloric acid to become even **smaller molecules** that can be **absorbed through the intestines** into the bloodstream.

The stomach has strong muscles to **churn(mix) the food** and **gastric juices**.

18. F | D | B

6 marks

Explanation:

1. The **small intestine(F)** is so long to ensure optimal digestion and absorption of nutrients.

2. Your **stomach(D)** is the central part of your body and also your digestive system, before nutrients can be absorbed by the body the food needs to be broken down into absorbable quantities.

3. Food is transported to the stomach from the mouth by the **oesophagus(B)**.

19. A: glucose + oxygen → energy + carbon dioxide + water

4 marks

Explanation:

The **chemical word equation** shows the process of **cell respiration**.

In this process energy from food is released in a chemical reaction. We need **oxygen and glucose** and the process **produces water, carbon dioxide and energy**.

Word equation:

oxygen + glucose → carbon dioxide + water + energy

20. plant | photosynthesis | chloroplast

6 marks

Explanation:

Chloroplast is the organelle **responsible for photosynthesis**. It is **only found in plant cells** and contains the **pigment chlorophyll**, that is responsible of the green color in plants and absorbs sunlight during photosynthesis to make food.

21. A: eyes, nose, ears, skin, tongue.

4 marks

Explanation:

Various sensory organs are responsible for collecting information and sending it via sensory nerves to the central nervous system.

Our sensory organs are our:

- ears
 - nose
 - eyes
 - skin
 - tongue
-

22. true

2 marks

Explanation:

The **gall bladder stores bile** until it is needed. It aids in the digestion of fats and oils.

23. kidneys | kidney

3 marks

Explanation:

Your **kidneys** produce **urine** which is a **combination of excess water and waste products**.

24. oxygenated | heart | deoxygenated

6 marks

Explanation:

When we **breathe in**, **oxygen** goes **into our lungs** and the **blood is oxygenated**. This blood travels from the **lungs to heart** and **then to the body**.

Deoxygenated blood flows **from the body** to **the heart** and **back to the lungs**.

25. false

3 marks

Explanation:

Puberty is brought on when the **pituitary gland** releases **specific hormones into the bloodstream**.

Total: 95 Marks

