higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

THE HUMAN BODY AND MIND
NQF LEVEL 2

15 November 2024

This marking guideline consists of 7 pages.

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QUESTION 1

1.1 1.1.1 False
1.1.2 False
1.1.3 True
1.1.4 False
1.1.5 True
1.1.6 True
1.1.7 True
1.1.8 False
1.1.9 True
1.1.10 True

(10 × 1) (10)

1.2 1.2.1 A cell is the basic structural and functional✓ part of the human body.✓ It is the smallest unit that can carry on the processes of life.✓

1.2.2 Anatomy is the study of different parts of the body and✓ how they fit and work together✓ to keep us alive.✓

(2 × 3) (6)

1.3 1.3.1
- Filters the blood and produces urine.
- Carries urine from the kidneys to the bladder.
- Collects and temporarily stores urine.
- Transports urine to the outside of the body. (4)

1.3.2
- Do not hold your urge to urinate for too long.
- Empty the bladder regularly.
- Empty the bladder completely.
- Wipe from front to back.
- Drink at least 2 litres of water per day.
- Stay physically active.
- Do not smoke.
- Avoid alcohol.
- Eat a healthy balanced diet. (Any 4 × 1) (4)

1.3.3 No✓
The kidneys filter the blood and remove waste and water from our bodies.✓ If it is not removed our bodies will become toxic and we will die.✓ (3)

1.4 1.4.1 Sweat
1.4.2 Carbon dioxide
1.4.3 Faeces

(3 × 1) (3)
[30]

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QUESTION 2

2.1 2.1.1 Gastrointestinal/digestive system
2.1.2 Cardiovascular system
2.1.3 Female reproductive system
2.1.4 Respiratory system
2.1.5 Brain and nervous system
2.1.6 Skin and integumentary system

(6 × 1) (6)

2.2 2.2.1 Plasma membrane
2.2.2 Muscle cells
2.2.3 Epithelial cells
2.2.4 Blood vessels
2.2.5 Appendages

(5 × 1) (5)

2.3 2.3.1 Testis
2.3.2 Urethra
2.3.3 Seminal vesicle
2.3.4 Erectile tissue
2.3.5 Prostate gland
2.3.6 Vas deferens
2.3.7 Scrotum

(7 × 1) (7)

2.4 2.4.1 The body's first line of defence is the skin.✓ The skin should be kept clean and free of bacteria that may invade the body.✓ An intact skin does not allow bacteria to enter through the skin.✓ When the skin is dry it may crack, which will allow bacteria to enter. Moisturise the skin to prevent cracking. (3)

2.4.2 The ear contains wax✓ and tiny hairs✓ that prevent micro-organisms from entering the body.
The nose contains mucous membranes✓ that will flush out foreign substances.
Sneezing − removes foreign substances from the nose.
Coughing − removes bacteria from the trachea. (3)

2.4.3
- Skin
- Hypothalamus (brain) (2)

2.4.4 When the body is fighting an infection,✓ the body temperature rises.✓ The body will sweat✓ to bring the temperature of the body back to normal.✓ (4)

[30]

QUESTION 3

3.1
- PNS (peripheral nervous system)
- CNS (central nervous system) (2)

3.2
- Long bones
- Short bones
- Flat bones
- Irregular bones (Any 3 × 1) (3)

3.3
- Internal and external movement of the body
- Maintains posture.
- Assist in the maintenance of body temperature. (Any 2 × 1) (2)

3.4
- Provides a framework for attachment for other tissues and organs.
- Protection of vital organs
- Movements of the body
- Storage and release of calcium and phosphorus
- Production of red blood cells (Any 3 × 1) (3)

3.5
- Prokaryotic cells do not have a nucleus✓ e.g., algae and bacteria.✓
- Eukaryotic cells contain a nucleus✓ e.g., human cells, animal cells, fungi.✓

(2 × 2) (4)

3.6
- The skin is an organ of sensation,✓ thus it will sense that the temperature is cold.✓
- The skin will produce less sweat✓ to prevent heat loss.✓
- The fat✓ in the dermis prevents the loss of heat.✓
- Gooseflesh occurs, which allows the hairs to trap warm air around the skin.

(Any 3 × 2) (6)

3.7
- Sight✓ – a person can see when there is danger ahead.✓
- Hearing✓ – a person can hear the doorbell ringing.✓
- Touch✓ – a person can know if the bath water is too hot.✓
- Smell✓ – a person can know if the food is burning on the stove.✓
- Taste✓ – a person can know if the milk is sour or not.✓ (5 × 2) (10)

[30]

QUESTION 4

4.1
4.1.1 Larynx
4.1.2 Trachea
4.1.3 Nose
4.1.4 Pharynx
4.1.5 Alveoli
4.1.6 Diaphragm
4.1.7 In front of

(7 × 1) (7)

4.2
- Cells that are similar in shape, form and function, grouped together to form tissues.✓
- Tissues that are similar, grouped together to form organs.✓
- Organs that are similar in function, grouped together to form organ systems.✓

(3 × 1) (3)

4.3
- Mouth
- Pharynx
- Oesophagus
- Stomach
- Small intestine
- Large intestine
- Rectum
- Anus
- Teeth
- Tongue
- Gall bladder

(Any 6 × 1) (6)

4.4 4.4.1
- Endocardium
- Myocardium
- Pericardium

(3)

4.4.2 Cardiac muscle tissue (1)

4.4.3
- The heart is divided into four chambers.
- Upper chambers are called atria.
- Lower chambers are called ventricles.
- A septum divides the heart into a left and right side.
- The bicuspid valve is located between the L atrium and L ventricle.
- The tricuspid valve is located between the R atrium and R ventricle.

(Any 4 × 1) (4)

4.4.4 Oxygenated✓ and de-oxygenated blood can mix.✓ More blood can enter the atria or ventricles. (2)

4.4.5
- The heart will have to work harder to send blood to the lungs✓ to be oxygenated.✓
- The heart will have to work harder to pump blood through the body.✓
- The lungs will have to work harder to oxygenate✓ the blood and to remove carbon-dioxide. (4)

[30]

QUESTION 5

5.1
5.1.1 C
5.1.2 E
5.1.3 K
5.1.4 J
5.1.5 B
5.1.6 D
5.1.7 G
5.1.8 H
5.1.9 I
5.1.10 A

(10 × 1) (10)

5.2
5.2.1 Punishment
5.2.2 Reward
5.2.3 Reward
5.2.4 Punishment
5.2.5 Punishment

(5 × 1) (5)

5.3
- Describe
- Explain
- Predict
- Control
- Improve (5)

5.4 5.4.1 Initiative✓ vs guilt✓ (2)

5.4.2 She felt guilty✓ because she knew that she did something wrong.✓ (2)

5.4.3 Yes✓
- Frieda did something naughty and hid the evidence.✓
- She might do it again.✓

OR

No
- This is a natural/normal response of a child.
- It shows that her imagination is developing. (3)

5.4.4 Yes✓

- Her bad behaviour should be punished✓ to ensure that it is not repeated.✓

OR

No

- She is a child and still learning.
- Her mother should explain what she did was wrong and that she should not do it again. (3)

[30]

TOTAL: 150

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