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

**XX February 2020**

**This marking guideline consists of 6 pages.**

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## QUESTION 1

1.1
1.1.1 C
1.1.2 G
1.1.3 H
1.1.4 E
1.1.5 I
1.1.6 A
1.1.7 B
1.1.8 D
1.1.9 J
11.10 F

(10 × 1) (10)

1.2 Digestive system (2)

1.3
- Mouth
- Oropharynx
- Oesophagus
- Stomach
- Small intestine
- Large intestine
- Rectum
- Anus (8)

1.4
- Teeth
- Tongue
- Gall bladder (3)

1.5
- Parotid
- Liver
- Pancreas (Any 2 × 1) (2)

1.6
- Long
- Short
- Flat
- Irregular (4)

1.7 Musculoskeletal system (Any relevant answer) (1)

**[30]**

## QUESTION 2

2.1
2.1.1 False
2.1.2 True
2.1.3 True
2.1.4 False
2.1.5 True
2.1.6 True
2.1.7 False
2.1.8 True
2.1.9 False
2.1.10 True

(10 × 1) (10)

2.2 2.2.1
A Left lung
B Larynx
C Nose
D Pharynx
E Trachea (5)

2.2.2 Digestive system (2)

2.2.3
- Nasopharynx – behind the nose
- Oropharynx – behind the mouth
- Laryngopharynx – lowermost portion of the pharynx (3 × 2) (6)

2.3
- Cerebrum
- Cerebellum
- Medulla
- Pons
- Midbrain
- Brain stem (Any relevant 5 × 1) (5)

2.4
- Central nervous system
- Peripheral nervous system (2)

**[30]**

## QUESTION 3

3.1 3.1.1 Chemical process✓ called catabolism✓ and anabolism✓ (3)

3.1.2 Main way of acquiring energy by absorbing oxygen through the semi-permeable membrane. (3)

3.1.3 Process of waste removal by the cell (2)

3.1.4 Eating ability of cell (2)

3.1.5 Ability of cell to respond to stimulus (2)

3.1.6 Ability of cells to reproduce itself during phases of cell division (2)

3.2
- Carbohydrates
- Lipids
- Proteins
- Nucleic acids (4)

3.3

| TYPE OF MUSCLE | APPEARANCE | WHERE THEY ARE FOUND | TYPE OF CONTROL |
|---|---|---|---|
| Skeletal | 3.3.1 Striped✓ | Attached to skeleton | 3.3.2 Voluntary✓ |
| 3.3.3 Smooth✓ | Spindle-shaped | 3.3.4 Walls of blood and lymph vessels,✓ digestive tract, respiratory tract, urinary bladder and uterus | Involuntary |
| Cardiac | Cylindrical-shaped | 3.3.5 Walls of heart✓ | Involuntary |

(5 × 1) (5)

3.4
- Chromatins begin to coil tightly and condense to form chromosomes.
- Chromosomes appear to have strands and each strand is called a chromatid.
- Two chromatids are result of DNA replication.
- Nucleus and nucleolus disappear.
- Tiny protein threads in the cytoplasm form spindle-shaped structure that extends through cell. (5)

3.5
- Interphase
- Metaphase
- Telophase
- Anaphase (Any 2 × 1) (2)

**[30]**

## QUESTION 4

4.1
4.1.1 Integumentary system
4.1.2 Nervous system
4.1.3 Female reproductive system
4.1.4 Urinary system
4.1.5 Cardiovascular system

(5 × 2) (10)

4.2
- Upright body
- Head facing forward
- Upright trunk
- Arms at the sides
- Palms facing forward
- Legs straight
- Feet facing forward (Any relevant 7 × 1) (7)

4.3
4.3.1 Cranial
4.3.2 Orbital
4.3.3 Sternum
4.3.4 Umbilical
4.3.5 Carpal

(5 × 1) (5)

4.4
- Helps to understand different diseases, germs and causes
- Gives knowledge to be able to prevent diseases
- Teaches how the body can defend itself against diseases (3)

4.5
- Before eating
- Before meal preparation
- After using the bathroom
- After cleaning a baby's diaper
- After cleaning the home
- After walking in the garden (Any relevant 5 × 1) (5)

**[30]**

## QUESTION 5

5.1 5.1.1
- Glomerular filtration
- Tubular reabsorption
- Tubular secretion (3)

5.1.2
- Two ureters carry urine from kidney to bladder
- Urinary bladder collects urine and temporarily stores it
- Urethra transports urine from bladder to leave body

(Any relevant 3 × 2) (6)

5.1.3 3–4 cm✓ (1)

5.2
- Cytoplasm
- Cell membrane
- Nucleus
- Nucleolus
- Ribosomes
- Centrioles
- Cilia
- Flagella
- Golgi complex (Any relevant 5 × 1) (5)

5.3
- Id✓ is a reservoir of instincts and drives. Demand of the body's need and wants✓ present at birth
- Ego✓ emerges during first year of life. Practical and rational component of personality. Ego tries to resolve conflict✓
- Superego✓ emerges during preschool years. Moral agent of personality✓

(Any relevant 3 × 2) (6)

5.4
- Used to explain the development of mind
- Roots of tree feed and nurture the tree and represent what feeds and nurtures the mind
- Trunk represents strength of tree
- Fruit represents outcome of hard work (Any relevant 3 × 2) (6)

5.5
- Biological
- Social
- Intrapsychic
- Socio-economic
- Socio-political
- Cultural factors (Any relevant 3 × 1) (3)

**[30]**

**TOTAL: 150**

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