higher education & training

Department:
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REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

THE HUMAN BODY AND MIND
NQF LEVEL 2

(9020072)

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13:00–15:00

This question paper consists of 10 pages.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)
THE HUMAN BODY AND MIND
NQF LEVEL 2
TIME: 2 HOURS
MARKS: 150

INSTRUCTIONS AND INFORMATION

1. Answer all the questions.
2. Read all the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. Use only black or blue ink.
5. Write neatly and legibly.

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QUESTION 1

1.1 Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (1.1.1–1.1.10) in the ANSWER BOOK.

1.1.1 Microscopic anatomy are structures that can be seen by the naked eye.

1.1.2 White blood cells deliver oxygen to different parts of the body.

1.1.3 Nervous tissue is found in the brain, spinal cord and nerves.

1.1.4 The mammary glands are found in females only. ☆

1.1.5 Temperature regulation is controlled by the brain.

1.1.6 A pale face could be as a result of severe blood loss or heat exhaustion.

1.1.7 The femoral pulse is located in the groin (upper leg).

1.1.8 Sweat glands secrete sebum, which prevents the skin from cracking.

1.1.9 The middle layer of the heart allows the heart to contract.

1.1.10 The orbital area is also referred to as the eyes.

(10 × 1) (10)

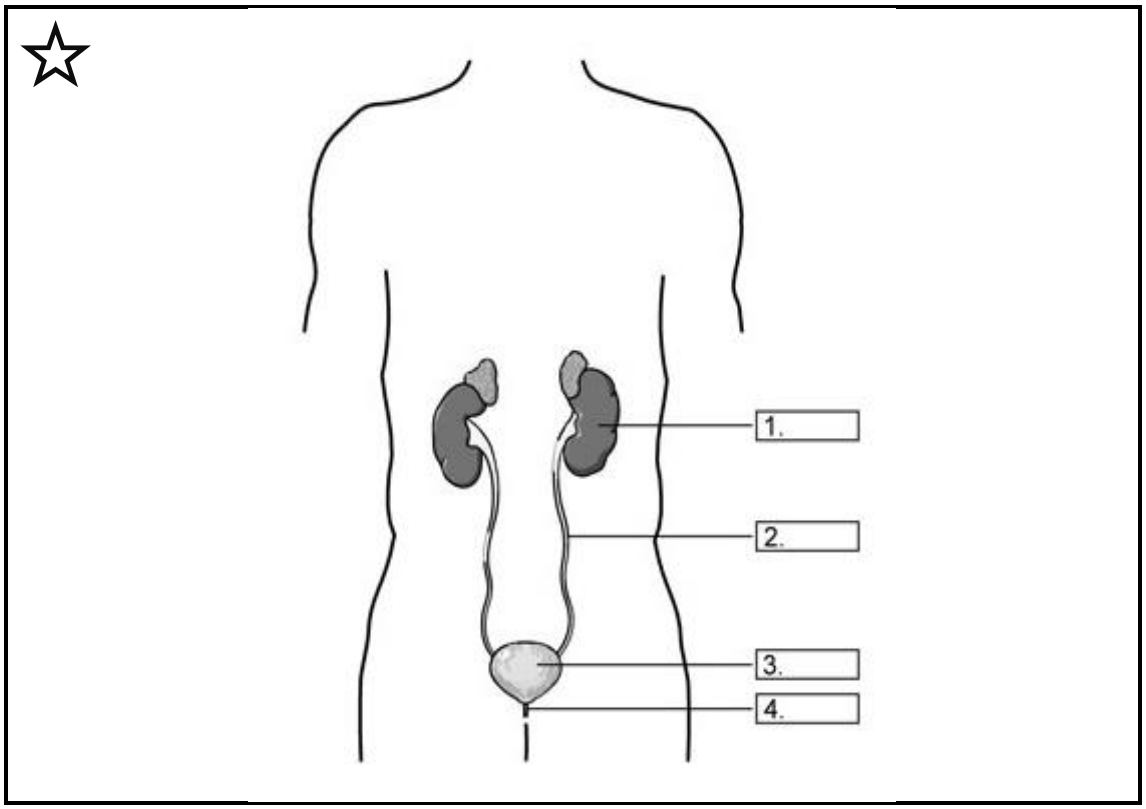
1.2 Define the following terms:

1.2.1 A cell ☆

1.2.2 Anatomy

(2 × 3) (6)

1.3 Study FIGURE 1 of the urinary system below and answer the questions.



THE URINARY SYSTEM

FIGURE 1

1.3.1 What are the functions of the organs labelled from 1−4? (4)

1.3.2 Suggest FOUR ways to keep your urinary system healthy. (4)

1.3.3 Do you think that the body will be able to function without kidneys? (3)

1.4 Indicate which waste substances are removed by each of the following systems:

1.4.1 Skin and integumentary system

1.4.2 Respiratory system

1.4.3 Digestive system

(3 × 1) (3)

[30]

QUESTION 2

2.1 Indicate to which body system each of the following organs/structures belong. Write only the answer next to the question number (2.1.1–2.1.6) in the ANSWER BOOK.

2.1.1 Oesophagus

2.1.2 Ventricle

2.1.3 Uterus

2.1.4 Nasopharynx

2.1.5 Hypothalamus

2.1.6 Epidermis

(6 × 1) (6)

2.2 Complete the following sentences by choosing a word or words from the list below. Write only the answer next to the question number (2.2.1–2.2.5) in the ANSWER BOOK.

nucleus; plasma membrane; muscle cells; epithelial cells; blood vessels; appendages

2.2.1 The outer layer of the cell is the ....

2.2.2 … make it possible for the body to move.

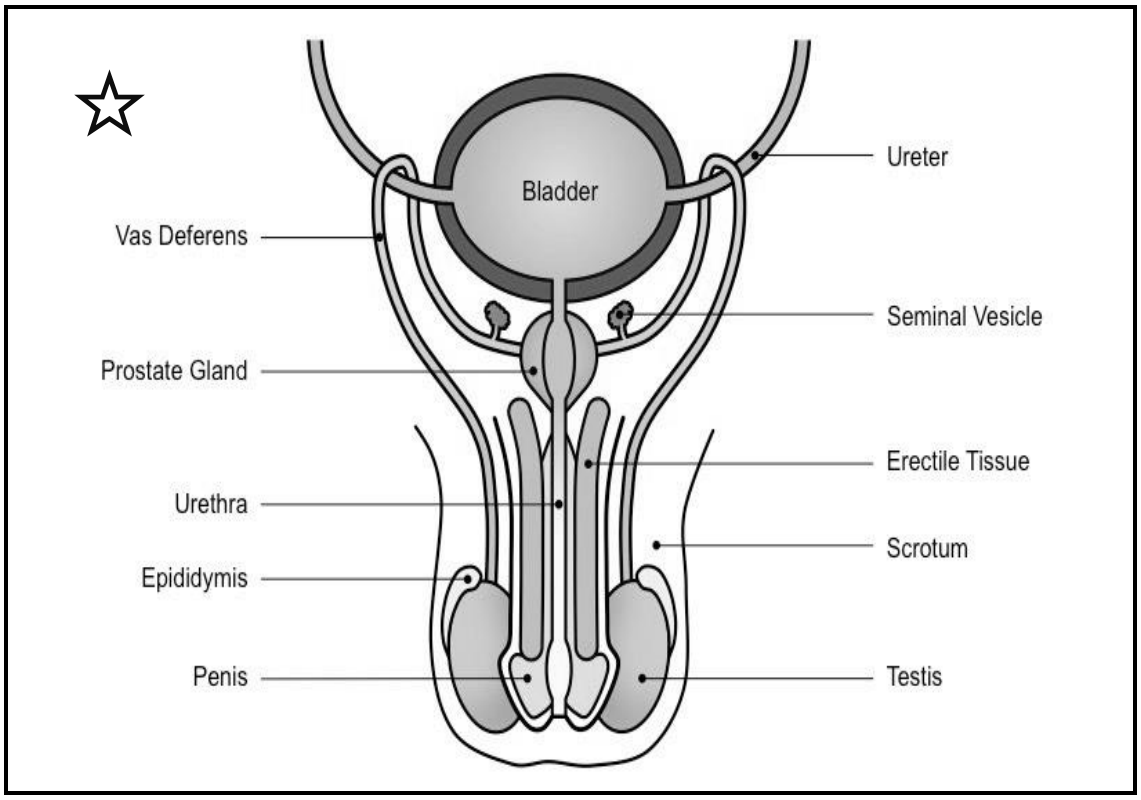
2.2.3 … is the outer covering of the body and the inner lining of body cavities.

2.2.4 The dermis contains …

2.2.5 Hair, nails and glands are called … of the skin.

(5 × 1) (5)

2.3 Study FIGURE 2 below and answer the questions.



MALE REPRODUCTIVE SYSTEM

FIGURE 2

Identify the organs on the diagram that match the descriptions below. Write only the word or words next to the question number (2.3.1–2.3.7) in the ANSWER BOOK.

2.3.1 Primary sex organs

2.3.2 A common passageway for urine and semen

2.3.3 Joins the vas deferens to form the ejaculatory duct

2.3.4 Spongy tissue that fills with blood

2.3.5 Donut shaped organ that surrounds the urethra

2.3.6 Transport sperm from the epididymis to the spermatic cord

2.3.7 A pouch-like sac of thin skin

(7 × 1) (7)

2.4 Read the scenario below and answer the questions.

Amy was in contact with her friend who had a cold. Within three days, Amy notices that she is sneezing, coughing and has a runny nose.

2.4.1 Educate Amy's family on the importance of keeping their skin clean, unbroken and moisturised to prevent disease. (3)

2.4.2 Explain how the ear, nose and throat passages protect the body against the common cold. (3)

2.4.3 Identify TWO organs that play a role in temperature regulation of the body. (2)

2.4.4 Determine why Amy will get a fever and sweat. (4)

[30]

QUESTION 3

3.1 Name the TWO divisions of the brain and nervous system. (2)

3.2 List THREE types of bones found in the human body. (3)

3.3 Name TWO functions of the muscular system. (2)

3.4 List THREE functions of the skeletal system. (3)

3.5 Explain the difference between prokaryotic and eukaryotic cells. Provide an example for each. (2 × 2) (4)

3.6 Discuss how the functions of the skin assist to protect your body on a cold day. (3 × 2) (6)

3.7 Explain how each of the FIVE senses allow the body to function normally. (5 × 2) (10)

[30]

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QUESTION 4

4.1 Choose the correct term from those in brackets. Write only the answer next to the question number (4.1.1–4.1.7) in the ANSWER BOOK.

4.1.1 The (larynx/pharynx) is responsible for voice production.

4.1.2 The (trachea/pharynx) contains cartilage rings.

4.1.3 The (mouth/nose) is the first respiratory organ.

4.1.4 The (mouth/pharynx) is common to both the respiratory and digestive systems.

4.1.5 (Alveoli/Bronchi) allow for gaseous exchange to occur.

4.1.6 The (diaphragm/trachea) allows the chest cavity to increase and decrease in size.

4.1.7 The trachea is situated (in front of/behind) the oesophagus.

(7 × 1) (7)

4.2 Discuss the development of cells into organ systems. (3)

4.3 Draw a mind map indicating SIX organs of the gastrointestinal system. (6)

4.4 Read the following scenario and answer the questions.

> During her 2-week checkup, Asavela's mother mentioned that Asavela has rapid breathing, she is always tired and sleepy and that she is not feeding properly or gaining weight.
> After thorough tests and consultations Asavela was diagnosed with a hole in the septum of her heart.

4.4.1 List the THREE layers of the heart. (3)

4.4.2 What type of muscle tissue is found only in the heart? (1)

4.4.3 Explain how the structure of the heart helps to ensure that the blood remains in the correct chambers. (4)

4.4.4 What are the dangers of having a hole in the heart? (2)

4.4.5 Why would Asavela's condition cause heart and lung complications if left untreated? (4)

[30]

QUESTION 5

5.1 Choose a term from COLUMN B that matches a description in COLUMN A. Write only the letter (A–L) next to the question number (5.1.1–5.1.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
5.1.1	Behaviourism theorist	A	blunted affect
5.1.2	How people feel about themselves	B	self-awareness
5.1.3	The absence of any exhibition of emotion	C	BF Skinner
		D	affect
5.1.4	The ability to process information, solve problems and make decisions	E	self-esteem
		F	behaviour
5.1.5	The explicit understanding of oneself and one's existence	G	Sigmund Freud
5.1.6	An observable expression of emotion	H	Erik Erikson
		I	self-concept
5.1.7	Psychodynamic theorist	J	cognition
5.1.8	Developmental theorist	K	flat affect
5.1.9	People's perceptions of themselves	L	self-regulated
5.1.10	A severe reduction in the display of emotion		

(10 × 1) (10)

5.2 Choose whether each of the following phrases refer to REWARD or PUNISHMENT. Write only the word 'Reward' or 'Punishment' next to the question number (5.2.1–5.2.5) in the ANSWER BOOK.

5.2.1 Jason was grounded for not doing his chores.

5.2.2 Amanda received R200 for babysitting her brothers and sisters.

5.2.3 Julia does not have to wash the dishes for a week because she passed her exam.

5.2.4 John received detention for late-coming.

5.2.5 Nina lost her job because she was caught stealing.

(5 × 1) (5)

5.3 List the FIVE basic goals of psychology. ☆ (5)

5.4 Read the scenario and answer the questions.

Frieda (4 years old) is not allowed to play with her sister's dolls. However, she took the doll while her sister was at school and accidentally broke the doll. Frieda decided to hide the broken doll under her bed.

5.4.1 Identify the psychosocial stage of Frieda. (2)

5.4.2 Why did Frieda hide the doll? (2)

5.4.3 Her mom found the broken doll under her bed.

Should Frieda's mother worry about her behaviour? (3)

☆ 5.4.4 Do you think that Frieda should be punished? Motivate your answer. (3)

[30]

TOTAL: 150

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