higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

THE HUMAN BODY AND MIND
NQF LEVEL 2

(9020072)

8 November 2018 (X-Paper)
09:00–12:00

This question paper consists of 7 pages.

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TIME: 3 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. Write neatly and legibly.

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QUESTION 1

1.1 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'True' or 'False' next to the question number (1.1.1–1.1.5) in the ANSWER BOOK.

1.1.1 Plasma membrane is a feature of a cell.

1.1.2 Epithelial tissue is used for binding parts of the body together.

1.1.3 Muscle tissue if found in every system besides the nervous system.

1.1.4 A bone cell is a eukaryotic cell.

1.1.5 A gland cell is not a eukaryotic cell.

(5 × 1) (5)

1.2 Define the following terms:

1.2.1 Anatomy

1.2.2 Cell

1.2.3 Ovum

1.2.4 Appendage

1.2.5 Tissue

(5 × 2) (10)

1.3 Name FOUR types of tissue found in the body. (4)

1.4 Discuss the function of the red blood cells. (2)

1.5 Describe the body in an anatomical position. (7)

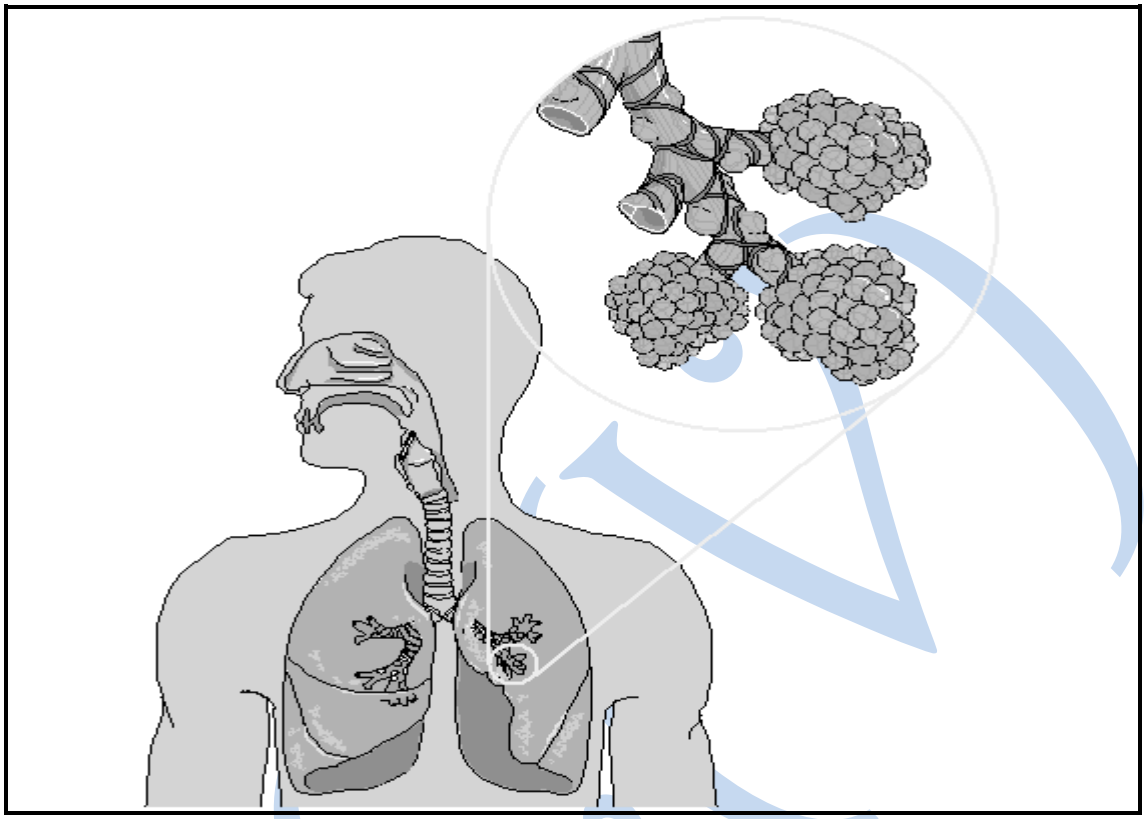
1.6 Identify TWO hand movements that can be done for someone who has suffered a stroke and needs hand exercises. (2)

[30]

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QUESTION 2

2.1 Study the figure below and answer the questions.



[Source: *WebMD, LLC*, 2009]

2.1.1 What is the name of the above system? (1)

2.1.2 What are the functions of this system? (2)

2.1.3 What other general functions does this system help with? (3)

2.1.4 Explain what happens in the body during inspiration and expiration. (4 × 2) (8)

2.1.5 List FOUR organs of the above system. (4)

2.2 Re-draw and complete the following table in the ANSWER BOOK.

	2.2.1	2.2.2	**Nitrogen**	**Other gases**
Inhaled air	21%	0,04%	78%	±1%
Exhaled air	2.2.3	4,04%	78%	2.2.4

(4 × 1) (4)

2.3 What is the function of the nose during respiration? (3)

2.4 Describe the supine position of the human body. (5)

[30]

QUESTION 3

3.1 Choose an item from COLUMN B that matches a description in COLUMN A. Write only the letter (A–K) next to the question number (3.1.1–3.1.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
3.1.1	Red blood cell	A	pump of blood
3.1.2	Tissue	B	long muscular tube
3.1.3	Heart	C	prepares for possible pregnancy each month
3.1.4	Hypothalamus	D	modified sweat gland
3.1.5	Mammary gland	E	sense of touch
3.1.6	Mitosis	F	transport oxygen
3.1.7	Oesophagus	G	division of cytoplasm
3.1.8	Uterus	H	alike cell ground together
3.1.9	Skin	I	control body temperature
3.1.10	Family values	J	helps us to inhale oxygen and exhale carbon dioxide
		K	division of nucleus

(10 × 1) (10)

3.2 Our bodies need blood in order for us to stay alive as blood transports important substances.

Name FIVE substances our blood transports. (5)

3.3 How many chambers is the heart divided in? (1)

3.4 Describe the THREE layers of the wall of the heart. (3 × 2) (6)

3.5 Explain how any FOUR main blood vessels allow for the flow of blood through the heart. (4 × 2) (8)

[30]

QUESTION 4

4.1 Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question number (4.1.1–4.1.5) in the ANSWER BOOK.

4.1.1 Natural opening of the body includes ...

A liver
B mouth
C feet
D hands

4.1.2 Normal body temperature is ...

A 37 °C
B 27 °C
C 47
D 17 °C

4.1.3 Organ that regulates body temperature ...

A cerebrum
B hypothalamus
C cerebellum
D medulla

4.1.4 ENT is an abbreviation ...

A ear, nose and trachea
B eyes, nose and throat
C ear, nose and throat
D eyes, nose and trachea

4.1.5 Sneezing removes bacteria from the ...

A nose
B mouth
C ears
D fingers

(5 × 1) (5)

4.2 List the FIVE functions of the skeletal system. (5)

4.3 Besides bones, what other TWO substances does the skeletal system consists of? (2)

4.4 Where in the bones are red and white blood cells produced? (1)

4.5 Give TWO functions of the muscular system. (2)

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4.6 Answer the following questions about the male reproductive system.

4.6.1 What is the function of the male reproductive system? (2)

4.6.2 Discuss the journey of the sperm from production to ejaculation. (7)

4.6.3 What is the optimal temperature for sperm production? (1)

4.7 Draw the female reproductive system and label FOUR parts of the system. (5)
[30]

QUESTION 5

5.1 List the FIVE basic goals of psychology. (5)

5.2 Define the following terms:

5.2.1 Affect

5.2.2 Behaviour

5.2.3 Cognition

5.2.4 Physiology

(4 × 2) (8)

5.3 Draw a 'Tree of Mental Health' diagram to represent your own 'Tree of Mental Health'. Label ONE of the roots, the trunk and TWO fruits. (5)

5.4 Name TWO psychological needs people need. (2)

5.5 Discuss Sigmund Freud and his theory. (10)
[30]

TOTAL: 150

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