higher education & training

Department:
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NATIONAL CERTIFICATE (VOCATIONAL)

THE HUMAN BODY AND MIND
NQF LEVEL 3

(9020083)

26 February 2020 (X-paper)
09:00–12:00

This question paper consists of 11 pages.

065Q1S2026

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TIME: 3 HOURS
MARKS: 180

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. Start each section on a new page.
5. Use only blue or black ink.
6. 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 Without the support of the skeleton, body organs would sag.

1.1.2 Quadriplegia is paralysis of the one side of the face.

1.1.3 Poor class attendance is an example of desirable behaviour.

1.1.4 Behaviourists explain behaviour in terms of a stimulus that causes a certain response.

1.1.5 The vagus nerve is a cranial nerve.

1.1.6 The lungs are square in shape.

1.1.7 The lower part of the oesophagus curves before it attaches to the stomach.

1.1.8 The jugular veins supply oxygenated blood to the head and the face.

1.1.9 Goosebumps is a protection mechanism of the skin to get rid of excessive heat.

1.1.10 Carl Jung, a psychodynamic theorist, is well-known for his dream studies.

(10 × 1) (10)

1.2 Arrange the organs and structures in the list below in table form according to the system to which they belong (endocrine system or immune system). Copy the table in the ANSWER BOOK.

axillary lymph nodes; ovaries; spleen; lymph fluid; tonsils; adrenal glands; thymus; thyroid gland; mammary glands; testis

ENDOCRINE SYSTEM	IMMUNE SYSTEM
•	•

(5 × 2) (10)

1.3 Name THREE different areas on the body where cartilage is found. (3)

1.4 Name TWO muscles that open and close the eyelids. (2)

1.5 Do you think a mind map is a useful tool to use when studying anatomy and physiology? Substantiate your answer. (5)

[30]

QUESTION 2

2.1 Complete the following sentences by choosing a word from the list below. Write only the answer next to the number (2.1.1–2.1.10) in the ANSWER BOOK.

Erik Erikson; lacrimal glands; cerebrospinal fluid; cervix; B.F. Skinner; levator ani; spinal cord; pectoralis; Ivan Pavlov; sciatic; ocular; vastus lateralis

2.1.1 According to … every person must go through a series of eight stages through life.

2.1.2 The … connects the vagina to the uterus.

2.1.3 The … is a muscle of the pelvic floor.

2.1.4 Injury to the … muscles of the eye can result in protrusion or drooping of the eye.

2.1.5 The breasts develop from the … muscles.

2.1.6 The longest nerve in the body is the … nerve.

2.1.7 Intra-muscular injections in the upper leg are given into the … muscle.

2.1.8 … is well-known for his experiments with dogs.

2.1.9 Structures situated in the corners of the eye lids to produce tears …

2.1.10 The … fluid cushions the brain and spinal cord to protect it from injury.

(10 × 1) (10)

2.2 Name the blood vessels that transport oxygenated blood to the following organs:

2.2.1 The outer layer of the heart

2.2.2 Stomach

2.2.3 Kidneys

2.2.4 Intestines

2.2.5 Liver

(5 × 1) (5)

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2.3 Peter is a 6-year-old boy. His mother is worried because she notices that his testes are swollen and feels warm when she dressed him. She decided to take him to the doctor for a check-up.

2.3.1 Describe the position of the testes. (1)

2.3.2 Explain why the mother made the correct decision to take Peter for a check-up. (3)

2.3.3 Do you think the testes are well-protected? Motivate your answer. (3)

2.4 Tumi is 10 months old. Her mother took her for immunizations until the age of three months. She has missed her first measles injection at nine months. Her mother is feeding her black tea from a dirty bottle for the past month. She does not want to eat anything. There is a measles outbreak in the village.

Explain the issues that are compromising Tumi's immune system to Tumi's mother and what she can do to improve the immune system. (5)

2.5 Name THREE microorganisms that can cause infections and are found almost everywhere. (3)

[30]

QUESTION 3

3.1 Choose a description from COLUMN B that matches a word or term in COLUMN A. Write only the letter (A–M) next to the question number (1.3.1–1.3.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
3.1.1	Sensory-motor stage	A	theorist who believes that the main aim of development is the forming of an identity
3.1.2	Trust compared to mistrust	B	waking up every morning the same time before the alarm goes off
3.1.3	B.F. Skinner	C	life stage where children are egocentric and only see things from their point of view
3.1.4	Pre-operational stage	D	phase you need to follow in order to change undesirable behaviour
3.1.5	Erik Erikson	E	theory that focusses on how humans function, based on their unconscious drives
3.1.6	Identity compared to role confusion	F	theorist who focused on cognitive development of children
3.1.7	Classical conditioning	G	personality trait characterised by willingness to try new activities
3.1.8	Openness to experience	H	personality trait characterized by anxiety and regular mood swings
3.1.9	Neuroticism	I	key concept of the psychodynamic approach
3.1.10	Jean Piaget	J	developmental stage in which parents should build trust relationships with young children
		K	well-known behaviourist theorist
		L	developmental stage where children learn through their senses and movements
		M	developmental stage where adolescents want to fit in with their peers

(10 × 1) (10)

3.2 Discuss how a person's immune system would be affected in the following situations.

3.2.1 Exercising 3–4 times a week

3.2.2 Dumping rubbish on an open field

3.2.3 Unsafe sex

3.2.4 A healthy diet

3.2.5 Taking care of your skin

(5 × 2) (10)

3.3 Draw an outline of the NINE abdominal regions and correctly label each region. (10)

[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 (4.1.1–4.1.10) in the ANSWER BOOK.

4.1.1 There are … thoracic vertebrae in the vertebral column.

A seven
B twelve
C five
D four

4.1.2 The longest bone of the arm is the …

A radius
B ulna
C humerus
D carpals

4.1.3 The dermis is composed of … tissue.

A adipose
B connective
C epithelial
D cardiac

4.1.4 The … is located behind the knee.

A aorta
B femoral artery
C coronary artery
D popliteal artery

4.1.5 The … glands that assist the body to cool down.

A sweat
B sebaceous
C parotid
D lacrimal

4.1.6 The … nerves that control movements of the tongue.

A trigeminal
B vagus
C facial
D hypoglossal

4.1.7 A form of negative feedback according to Erik Erikson is …

A building relationships of trust with children
B allowing children to explore their environments
C not supporting children when they struggle with feedback
D guiding adolescents with career development

4.1.8 Pain in the hypogastric region may be caused by …

A appendicitis.
B heart burn.
C kidney infection.
D bladder infection.

4.1.9 The triceps muscle is found ...

A in the thigh.
B at the back of the upper arm.
C at the front of the upper arm.
D at the back of the forearm.

4.1.10 The outer wall of the uterus is the …

A perimetrium.
B myometrium.
C myocardium.
D endometrium.

(10 × 1) (10)

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4.2 Indicate whether each of the following terms is related to the BEHAVIOURIST or PSYCHODYNAMIC approaches in psychology. Write only 'Behaviourist' or 'Psychodynamic' next to the question number (4.2.1–4.2.5) in the ANSWER BOOK.

4.2.1 Positive or negative reinforcement

4.2.2 Operant conditioning

4.2.3 Oral stage

4.2.4 Reward

4.2.5 Phallic stage

(5 × 1) (5)

4.3 Provide practical examples of how each of the senses protects the body.

(5 × 2) (10)

4.4 Read the statement below and agree or disagree. Motivate your answer

A person who is unable to pass urine may have a weakened immune system. (3)

4.5 In your opinion, why will a person die if the aorta is unable to do its function? (2)

[30]

QUESTION 5

5.1 Name the systems to which each of the following structures belongs. Write only the answer next to the number (5.1.1–5.1.10) in the ANSWER BOOK.

5.1.1 Cervical lymph nodes

5.1.2 Brachial arteries

5.1.3 Oesophageal nerves

5.1.4 Spinal cord

5.1.5 Patella

5.1.6 Achilles tendon

5.1.7 Seminal vesicles

5.1.8 Alveoli

5.1.9 Brachioradialis

5.1.10 Salivary glands

(10 × 1) (10)

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5.2 List FOUR signs of inflammation. (4)

5.3 Name SIX symptoms of anaphylactic shock. (6)

5.4 Read the case study below and answer the questions.

Zola is 14 years old. She started menstruating a few months ago. She has many questions but her mother is always too busy to listen to her. All Zola's friends are menstruating much longer than her and are already sexually active.

5.4.1 Identify the psychosocial developmental stage of Erik Erikson in which Zola is. (1)

5.4.2 Discuss whether Zola received positive or negative feedback from her mother. Motivate your answer. (3)

5.4.3 What do you think can happen if Zola listens to her friends' advice? (3)

5.4.4 Give TWO suggestions of how Zola's mother should have handled the situation. (2)

5.4.5 Identify the cognitive developmental stage of Jean Piaget in which Zola is. (1)

[30]

QUESTION 6

6.1 Choose the correct word or words from those given in brackets. Write only the word or words next to the question number (6.1.1–6.1.10) in the ANSWER BOOK.

6.1.1 Small pimples on the skin that looks like the skin of a plucked duck; induced by cold or fear is (goosebumps/acne).

6.1.2 Defenses formed by the immune system to protect the body are (antibodies/allergens).

6.1.3 Modification of unwanted behavior is (behaviour change/positive reinforcement)

6.1.4 (Immunodeficiency/fever) is a compromised state of the body when it is unable to defend itself against infections.

6.1.5 An (allergen/antibody) is a substance present in the environment to which some people are sensitive.

6.1.6 Infection of the lung which could be caused by bacteria is (pneumonia/tonsillitis).

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6.1.7 A disorder that causes the airways of the lungs to swell and narrow and cause difficult breathing is (asthma/flu).

6.1.8 Children are able to think and reason in more abstract ways in the (formal operational/pre operational) stage.

6.1.9 An approach that helps to understand the root of a person's problems or issues (psychodynamic/developmental).

6.1.10 (Neuroticism/introversion) is a personality type characterized by the tendency to be quiet and reserved.

(10 × 1) (10)

6.2 Draw a mind map to show any FIVE structures that provide protection to the respiratory system. (5 × 2) (10)

6.3 Discuss why someone with an extroversion personality trait will have difficulty focusing during a lecture where students are required to listen and pay attention. (6)

6.4 Name FOUR intra-ocular structures that protect the eye. (4)

[30]

TOTAL: 180

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