



NCFE CACHE Technical Level 3 Extended Diploma in Health and Social Care (601/8435/8)

Unit title: DM3.1 Anatomy and physiology
for health and social care

Assessment code: HSC/SAE
Paper number: P001380

Thursday 27 January 2022

9.00 am–11.00 am

Time allowed: 2 hours

Learner instructions

- Use black or blue ink. If you write your answers in pencil they will not be marked.
- Answer **all** questions.
- Read each question carefully.
- You must write your responses in the spaces provided.
- You may do rough work in this answer book. Cross through any work you do not wish to be marked.
- All of the work you submit **must** be your own.

Learner information

- The marks available for each question are shown in brackets.
- The maximum mark for this paper is 100.

Please complete the details below clearly and in BLOCK CAPITALS.

Learner name _____

Centre name _____

Learner number

Centre number

To be completed by the examiner			
Question	Mark	Question	Mark
1 (a)		3 (c)	
1 (b)		3 (d)	
1 (c)		4 (a)	
1 (d)		4 (b)	
2 (a)		4 (c)	
2 (b)		4 (d)	
2 (c)		5 (a)	
2 (d)		5 (b)	
3 (a)		5 (c)	
3 (b)		5 (d)	
			TOTAL MARK

Do not turn over until the invigilator tells you to do so.

Answer **all** questions in the spaces provided.

1 (a) Name the piece of equipment used to measure body temperature. **[1 mark]**

1 (b) Hair helps to maintain body temperature.
Give **one (1)** way hair helps to maintain body temperature **and** explain this process. **[3 marks]**

1 (c) Maintaining body temperature is a homeostatic mechanism.
Discuss the relationship between the endocrine system and the nervous system in gaining homeostatic control. **[12 marks]**

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PAST PAPER

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1 (d) In the nervous system, impulses pass along the membrane of a nerve cell.

Identify this process **and** explain its function.

[4 marks]

Process _____

Function _____

2 (a) Discuss the structure **and** function of the appendicular skeletal system.

[6 marks]

2 (b) Discuss how the structure of bone assists its function.

[6 marks]

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2 (c) The skeletal and muscular systems work together.

Identify **and** describe the tissue that connects bone to muscle.

[4 marks]

Tissue _____

Description _____

2 (d) Actin is one of two proteins involved in muscle contraction.

Identify the **other** protein involved in muscle contraction **and** explain the structure and function of this **other** protein.

[4 marks]

Protein _____

Explanation _____

3 (a) Identify **three (3)** types of blood vessel.

[3 marks]

1 _____

2 _____

3 _____

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Please turn over for the next question.**

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3 (c) Blood is pumped to the alveoli in the lungs for gaseous exchange.

Identify **and** explain the chemical process that enables gaseous exchange.

[4 marks]

3 (d) Identify **and** discuss what ability an individual must have to enable them to give informed consent.

[4 marks]

4 (a) Identify **and** explain the physical process in digestion that helps with the passage of food through the digestive tract.

[4 marks]

Process _____

Explanation _____

4 (b) Discuss the role of enzymes in chemical digestion.

[6 marks]

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4 (c) Discuss the function of **both** the liver **and** the gall bladder in digestion. **[6 marks]**

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4 (d) Identify the organ that receives food from the oesophagus **and** explain the structure and function of this organ. **[4 marks]**

Organ _____

Explanation _____

5 (a) Analyse how the structure of skin supports body function. **[9 marks]**

5 (b)

Identify **and** explain the mechanism activated by stress that can affect body temperature.

[4 marks]

5 (c) Apart from the mechanism you identified in question **5 (b)**, identify **two (2) other** factors that may affect body temperature **and** briefly explain how **one (1)** of these two factors affects body temperature.

[3 marks]

Factor 1 _____

Factor 2 _____

Explanation _____

5 (d) Identify the vitamin synthesised by the skin **and** explain this process.

[4 marks]

Vitamin _____

Explanation _____

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