

## Level 3 Cambridge Technical in Health and Social Care

05831/05832/05833

### Unit 4: Anatomy and physiology for health and social care

16 January 2017 – Morning

Time allowed: 2 hours

**You must have:**

- none

**You may use:**

- none

First Name						Last Name					
Centre Number						Candidate Number					
Date of Birth											

#### INSTRUCTIONS

- Use black ink.
- Complete the boxes above with your name, centre number, candidate number and date of birth.
- Answer **all** the questions.
- Write your answer to each question in the space provided.
- If additional space is required, you should use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.

#### INFORMATION

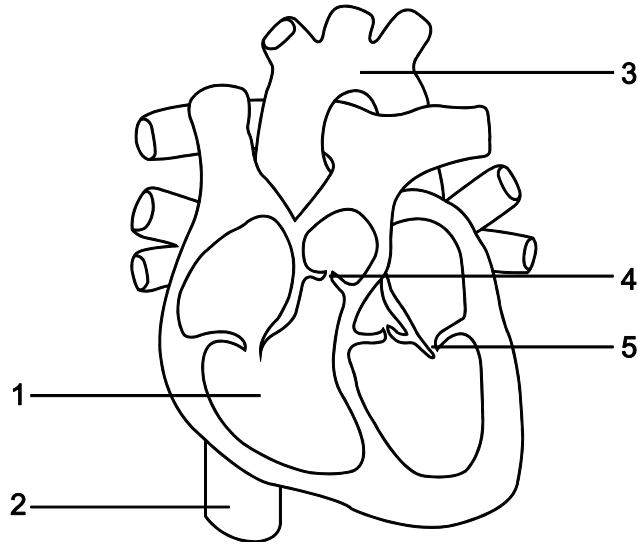
- The total mark for this paper is **100**.
- The marks for each question are shown in brackets [ ].
- Quality of extended responses will be assessed in questions marked with an asterisk (\*).
- This document consists of **16** pages.

FOR EXAMINER USE ONLY	
Question No	Mark
1	/13
2	/15
3	/19
4	/26
5	/27
<b>Total</b>	<b>/100</b>

Answer **all** questions.

1

**The Human Heart**



**(a)** Identify **one** key function for each of the structures labelled 1-5 in the diagram above.

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**[5]**

(b) Paul experiences some chest pains and as a result he is admitted to hospital for tests. The results show that there is a malfunctioning of his coronary arteries.

(i) Describe the function of the coronary arteries.

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..... [2]

(ii)\* Explain the possible causes of the malfunctioning of Paul's coronary arteries and how it could affect his health.

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..... [6]

2 Oxygen is required for cellular respiration.

(a) (i) Identify **one** other chemical that is required for cellular respiration.

..... [1]

(ii) Identify **two** products of cellular respiration.

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..... [2]

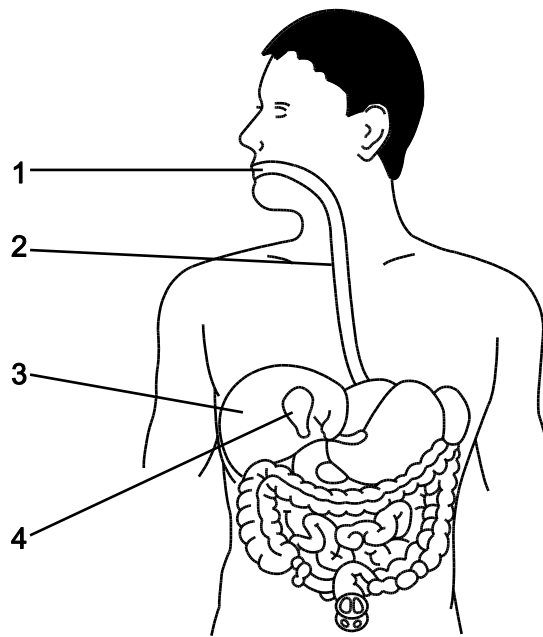
(b) Davina has cystic fibrosis.

(i)\* Explain how this condition affects Davina’s physical respiratory health.

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### Digestive System



(a) Identify **one** digestive function of each part of the digestive system labelled 1-4 in the diagram above.

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[4]

(b) The stomach carries out both mechanical and chemical digestion.

(i) Explain how the stomach carries out each of these functions.

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[4]

(ii) Describe how the small intestine is adapted to absorb the products of digestion.

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[3]

(c) Daisy has been diagnosed with irritable bowel syndrome (IBS). It has been suggested that she keeps a food diary, avoids fizzy drinks and coffee and takes up some form of exercise.

Give a reason for **each** of these three suggestions.

Keep a food diary:

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.....

Avoid fizzy drinks and coffee:

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.....

Take up some form of exercise:

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.....

[3]

**(d)** Bernard has cirrhosis of the liver.

Describe what is meant by the term 'cirrhosis of the liver'.

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..... [2]

**(e)** Excessive consumption of alcohol is normally the cause of liver cirrhosis.

Identify what a healthy liver does to alcohol.

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..... [1]

**(f)** Alcohol also affects the cerebellum of the brain.

**(i)** Identify the function of the cerebellum.

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..... [1]

**(ii)** Describe the effect of alcohol on the cerebellum.

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..... [1]



4 Donald, 68, has severe osteoarthritis in his knees and hands.

**(a)\*** Explain what happens in a joint to cause arthritis.

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**(b)\*** Analyse the likely impact of the arthritis on Donald's health and well-being.

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(c) Donald’s wife, Mary aged 58, has developed AMD (age related macular degeneration).

(i) Name the layer of the eye affected by this condition.

.....[1]

(ii) Identify **one** effect this condition will have on Mary’s vision.

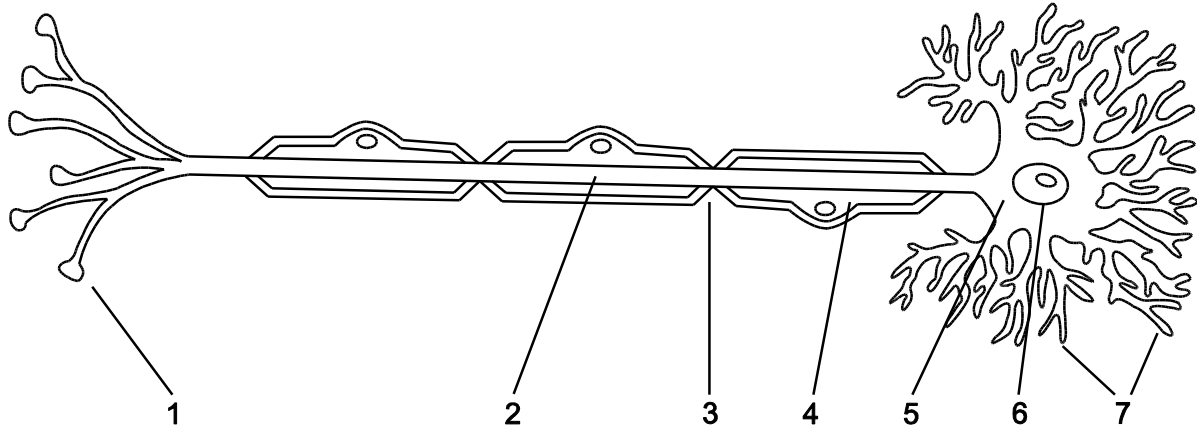
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(iii)\* Explain the likely impact of AMD on Mary’s daily life.

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5 Diagram of a nerve cell (neuron).



(a) (i) Identify the structures labelled 1-7 on the diagram above.

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[7]

(ii) Explain the function of the structure shown by number 1 on the diagram above.

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[2]

- (b) John, 67, has a severe stroke. His family have been told that his cerebral cortex has been damaged but that he may show some recovery.
  - (i)\* Explain how a stroke may damage the cerebral cortex and what the likely effects on body function may be.

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**ADDITIONAL ANSWER SPACE**

If additional answer space is required, you should use the following lined pages. The question number(s) must be clearly shown – for example 2(b) or 5(a).

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