

Please write clearly in block capitals.

Centre number

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Candidate number

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Surname

Forename(s)

Candidate signature

GCSE BIOLOGY

F

Foundation Tier

Paper 1F

Tuesday 15 May 2018

Afternoon

Time allowed: 1 hour 45 minutes

Materials

For this paper you must have:

- a ruler
- a scientific calculator

Instructions

- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions in the spaces provided.
- Do all rough work in this book. Cross through any work you do not want to be marked.
- In all calculations, show clearly how you work out your answer.

Information

- There are 100 marks available on this paper.
- The marks for questions are shown in brackets.
- You are expected to use a calculator where appropriate.
- You are reminded of the need for good English and clear presentation in your answers.

For Examiner's Use

Question	Mark
1	
2	
3	
4	
5	
6	
7	
8	
TOTAL	



0 3 . 3

Protease is an enzyme.

Protease breaks down protein.

What is protein broken down into?

[1 mark]

Tick **one** box.

Amino acids

☒

Fatty acids

☐

Glucose

☐

Glycerol

☐

0 3 . 4

Why is protein needed by the body?

[1 mark]

For growth of body organs and for
enzymes

0 3 . 5

Which organ in the human digestive system produces protease?

[1 mark]

Tick **one** box.

Gall bladder

☐

Large intestine

☐

Liver

☐

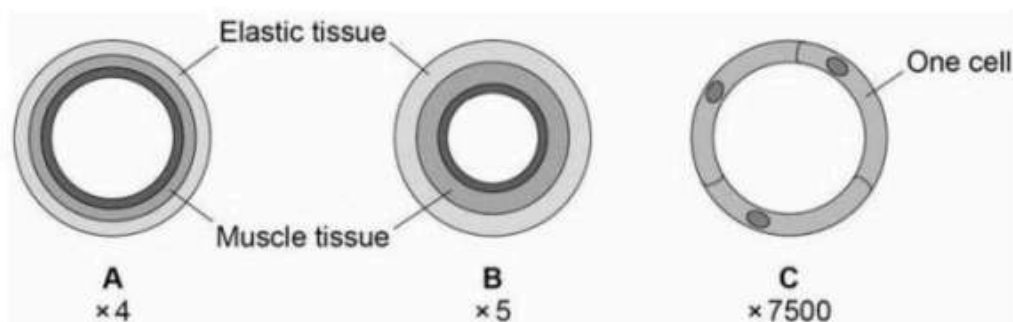
Stomach

☒

Turn over ►

0 4 . 2

Figure 6 shows cross sections of the three main types of blood vessel found in the human body. Each blood vessel is drawn to the scale shown.

Figure 6

Which blood vessel has the smallest diameter?

[1 mark]

Tick **one** box.

A	☐
---	--------------------------

B	☐
---	--------------------------

C	☒
---	-------------------------------------

0 4

. 3

Which blood vessel in **Figure 6** is an artery?

Give **one** reason for your answer.

[2 marks]

Blood vessel: elastic tissue

Reason: Narrow Lumen

0 7

Eating food containing *Salmonella* bacteria can cause illness.

0 7 . 1

Two symptoms of infection by *Salmonella* are vomiting and diarrhoea.

What causes these symptoms?

[1 mark]

Poisons or toxins secreted by the bacteria.

0 7

. 2

Give **two** ways a person with a mild infection of *Salmonella* can help prevent the spread of the bacteria to other people.

[2 marks]

1 After using the restroom, wash your hands.

2 Clothes should be disinfected

0 7 . 3

In very serious infections of *Salmonella*, a doctor can prescribe drugs to kill the bacteria.

What type of drug can the doctor prescribe to kill the bacteria?

[1 mark]

Antibiotics

0 7 . 4

A person with AIDS may take longer than a healthy person to recover from a *Salmonella* infection.

Explain why.

[2 marks]

Immune system become weakened.

Salmonella cannot be killed by white blood cells.

Turn over ►

0 7 . 8

Give **one** change to the investigation that would allow the scientist to check if the results are repeatable.

[1 mark]

Check to see if the outcomes are the same each time.

0 7 . 9

The scientist showed the results to the restaurant owner.

Both cleaning liquids cost the same per dm^3 .

Suggest **one** other factor the restaurant owner should consider when choosing which cleaning liquid to use.

[1 mark]

Toxicity or side effects.

Turn over for the next question

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Turn over ►

0 8 . 3

Calculate the percentage decrease in the mean metabolic rate of males between 5 years and 45 years of age.

Use the equation:

$$\text{percentage decrease} = \frac{\text{decrease in metabolic rate}}{\text{original metabolic rate}} \times 100$$

Give your answer to 3 significant figures.

[3 marks]

$$17/53 \times 100$$

$$32.07547$$

$$\text{Percentage decrease} = 32.1$$

Question 8 continues on the next page

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