AQA GCSE Combined Science - Trilogy | 8464

SPECIFICATION POINT 4.3.1.7

Vaccination

Past-paper questions

Tier	**Foundation**
Question groups	**3**
Available paper years	**2019–2025**

Using this booklet

1. Answer the questions in order and show your working.
2. Original question numbers and marks are retained.
3. Print at actual size (100%) for measuring questions.
4. Use the companion answer booklet to check your work.

Name: _____ **Date:** _____

Whole questions are retained for context, so some parts assess other specification points. Current and legacy sources are labelled. Continue on extra paper if needed.

4.3.1.7 Vaccination

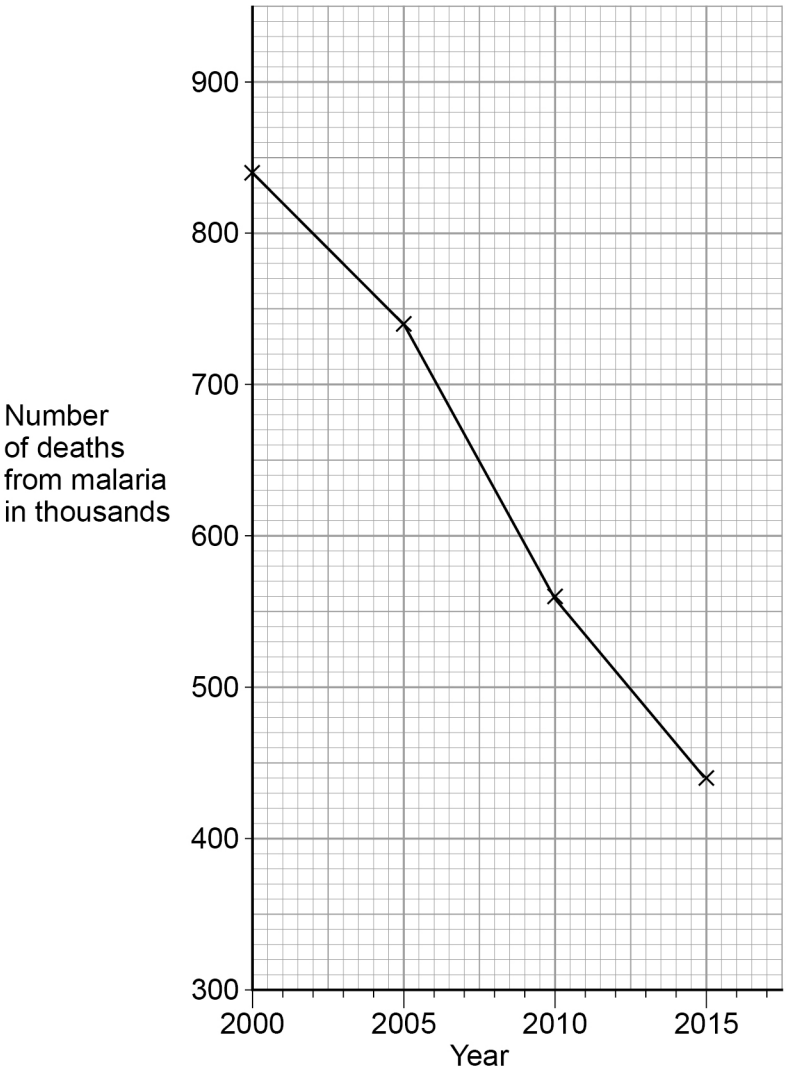
Question 01

June 2019 | 8464/B/1F | Original Q5

0 5 Malaria is a disease transmitted by mosquitos.

Figure 9 shows information about the number of deaths from malaria.

Figure 9



0 5 . 1 Calculate the decrease in the number of deaths between 2000 and 2015.

[2 marks]

Decrease in number of deaths = _____

4.3.1.7 Vaccination

Question 01 · continued

0 5 . 2 Which time period shows the greatest decrease in the number of deaths?

[1 mark]

Tick (✓) **one** box.

2000 to 2005 ☐

2005 to 2010 ☐

2010 to 2015 ☐

0 5 . 3 A student looked at **Figure 9** and concluded that there were 800 000 deaths from malaria in 2002.

Suggest **one** reason why this conclusion might **not** be correct.

[1 mark]

_____

_____

0 5 . 4 What type of pathogen causes malaria?

[1 mark]

Tick (✓) **one** box.

Bacterium ☐

Fungus ☐

Protist ☐

Virus ☐

4.3.1.7 Vaccination

Question 01 · continued

0 5 . 5 Scientists are developing a vaccine against malaria.

Suggest how a vaccine against malaria could reduce the spread of the disease.

[2 marks]

0 5 . 6 Give **one** way of controlling the spread of malaria.

Do **not** refer to a vaccine in your answer.

[1 mark]

8

4.3.1.7 Vaccination

Question 02

June 2022 | 8464/B/1F | Original Q5

0 5 Bacteria can cause a variety of diseases in humans.

0 5 . 1 What are **two** similarities between a bacterial cell and an animal cell?

[2 marks]

Tick (✓) **two** boxes.

- Both have a cell membrane. ☐
- Both have a cell wall. ☐
- Both have a nucleus. ☐
- Both have cytoplasm. ☐
- Both have plasmids. ☐

0 5 . 2 Salmonella food poisoning is caused by bacteria in food.

Give **one** symptom of salmonella food poisoning.

Do **not** refer to vomiting or diarrhoea in your answer.

[1 mark]

Question 5 continues on the next page

4.3.1.7 Vaccination

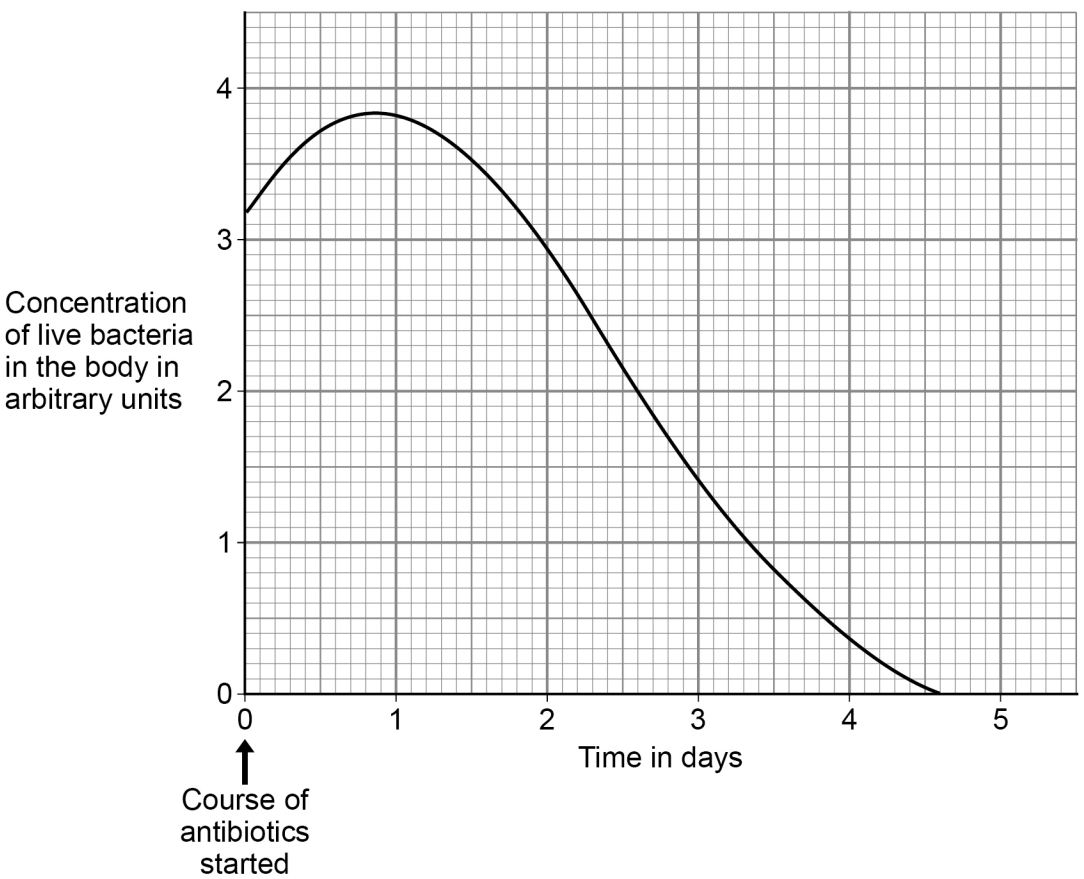
0 5 . 3 What is the name of the first antibiotic developed?

[1 mark]

A child with a severe bacterial infection was given a course of antibiotics.

Figure 7 shows how the concentration of live bacteria in the child's body changed when taking the course of antibiotics.

Figure 7



4.3.1.7 Vaccination

Question 02 · continued

0 5 . 4 The concentration of live bacteria in the body continued to increase after starting the course of antibiotics.

Suggest **one** reason why.

[1 mark]

0 5 . 5 After 3 days of taking the antibiotic:

- the child felt better
- there were still bacteria in the child's body.

Why did the child feel better?

[1 mark]

Tick (✓) **one** box.

Bacteria had become immune to the antibiotic. ☐

The child had become resistant to the bacteria. ☐

There were fewer toxins in the body than at day 0 ☐

0 5 . 6 Suggest why doctors do **not** give antibiotics to patients with minor infections.

[1 mark]

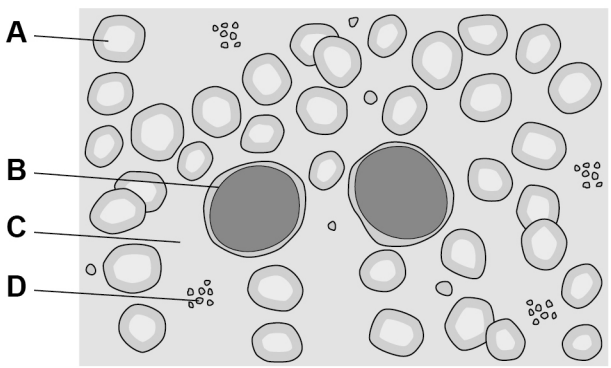
Question 5 continues on the next page

4.3.1.7 Vaccination

Question 02 · continued

Figure 8 shows blood viewed using a microscope.

Figure 8



0 5 . 7 A vaccine will stimulate the production of antibodies.

Which part of the blood in **Figure 8** produces antibodies?

[1 mark]

Tick (✓) **one** box.

A ☐ **B** ☐ **C** ☐ **D** ☐

0 5 . 8 Which part of the blood in **Figure 8** starts the clotting process?

[1 mark]

Tick (✓) **one** box.

A ☐ **B** ☐ **C** ☐ **D** ☐

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4.3.1.7 Vaccination

Question 03

June 2025 | 8464/B/1F | Original Q6

0 6 Chickenpox is an infectious disease that affects young children.

0 6 . 1 One symptom of chickenpox is small blisters on the skin.

Suggest **one** way chickenpox spreads from an infected person to other people.

[1 mark]

0 6 . 2 Chickenpox is caused by a type of pathogen that **cannot** be treated with antibiotics.

Give the reason why chickenpox **cannot** be treated with antibiotics.

[1 mark]

A vaccine that could be used to protect against chickenpox has been produced.

0 6 . 3 What does a vaccine contain that causes a person to become immune to a disease?

[1 mark]

0 6 . 4 Give **three** reasons why a new vaccine must be tested.

[3 marks]

1

2

3

4.3.1.7 Vaccination

Question 03 · continued

0 6 . 5 Explain how a vaccine for chickenpox gives immunity against the disease.

You should refer to how the body responds to:

- the vaccine
- chickenpox pathogens that enter the body after vaccination.

[6 marks]

Extra Space

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