AQA – Communicable diseases – GCSE Biology

1. May/2020/Paper_1F/No.3

The human body can defend itself against microorganisms that cause disease.

Viruses are one type of microorganism that cause disease.

0 3 . 1 Name **one** type of microorganism that causes disease in humans.

Do **not** refer to viruses in your answer.

[1 mark]

_____

0 3 . 2 Which **two** defence systems prevent microorganisms infecting the human body?

[2 marks]

Tick (✓) **two** boxes.

- Air is warmed as it is breathed into the lungs. ☐
- Hairs on the skin trap microorganisms. ☐
- Hydrochloric acid is produced by the stomach. ☐
- Teeth in the mouth crush and kill microorganisms. ☐
- The skin is a barrier covering the whole body. ☐

0 3 . 3 If microorganisms enter the human body the immune system can destroy the microorganisms.

How does the immune system destroy microorganisms?

[1 mark]

Tick (✓) **one** box.

- Platelets kill the microorganisms. ☐
- Red blood cells stick to the microorganisms. ☐
- White blood cells engulf the microorganisms. ☐

0 3 . 4 Vaccinations prevent people becoming ill with diseases such as measles.

Complete the sentences.

[2 marks]

Choose answers from the box.

active	**fast**	**resistant**	**slow**	**weakened**

In a vaccine the measles virus is _____.

If the measles virus enters the body after vaccination the immune system reaction will be _____.

0 3 . 5 How is the measles virus spread from one person to another?

[1 mark]

_____

_____

Doctors investigated the spread of the virus that causes chickenpox.

The first symptom of chickenpox after exposure to the virus is spots on the body.

23 children were playing together at a party.

On the day of the party one of the children developed chickenpox spots.

Every two days after the party, the doctors recorded when the other 22 children first showed chickenpox spots.

Table 1 shows the results.

Table 1

Day when chickenpox spots first showed	Number of children
2	0
4	0
6	0
8	0
10	1
12	1
14	6
16	4
18	2
20	0
Total	**14**

0 3 . 6 What was the range for the days on which children first showed chickenpox spots?

Use **Table 1**.

[1 mark]

From day _____ to day _____

0 3 . 7 Incubation time is the usual time from exposure to a pathogen until the first symptoms appear.

Suggest the most likely incubation time for chickenpox.

[1 mark]

Incubation time = _____ days

0 3 . 8 Suggest **one** reason why some of the children did **not** develop chickenpox.

[1 mark]

_____

_____

0 3 . 9 One mother gave antibiotics to her child who had chickenpox.

Suggest why this child did **not** recover more quickly than the other children who had chickenpox.

[1 mark]

_____

_____

2. May/2019/Paper_1F/No.8

Mosquitoes carry a pathogen that causes malaria.

0 8 . 1 What type of pathogen causes malaria?

[1 mark]

Tick (✓) **one** box.

A bacterium ☐

A fungus ☐

A protist ☐

A virus ☐

Mosquito nets can help prevent the spread of malaria.

Table 7 shows the results of a study in one area of Africa.

Table 7

Total number of people in the study	Number of people who use mosquito nets when sleeping	Percentage of people with malaria	
		Who use mosquito nets when sleeping	Who do NOT use mosquito nets when sleeping
476	426	1.2	40

A newspaper made the following statement:

'Study shows mosquito nets are scientifically proven to prevent malaria.'

0 8 . 2 Give **one** piece of evidence that supports the statement.

[1 mark]

0 8 . 3 Suggest **one** reason why the statement may **not** be valid.

[1 mark]

Table 8 shows information about the number of deaths from malaria in the same area of Africa.

Table 8

Year	Number of deaths from malaria per 100 000 people
2005	161
2007	136
2009	114
2011	97
2013	94
2015	92

0 8 . 4 Predict the number of people per 100 000 who died from malaria in 2017 if the trend stayed the same.

[1 mark]

Number of people per 100 000 = _____

0 8 . 5 Use of mosquito nets has helped to reduce the number of deaths from malaria each year.

Suggest **one** other reason for the reduced number of deaths from malaria each year.

[1 mark]

0 8 . 6 Describe how the human body:

- prevents pathogens from entering
- defends itself against pathogens inside the body.

[6 marks]

3. May/2019/Paper_1H/No.2

Mosquitoes carry a pathogen that causes malaria.

0 2 . 1 What type of pathogen causes malaria?

[1 mark]

Tick (✓) **one** box.

A bacterium ☐

A fungus ☐

A protist ☐

A virus ☐

Mosquito nets can help prevent the spread of malaria.

Table 1 shows the results of a study in one area of Africa.

Table 1

Total number of people in the study	Number of people who use mosquito nets when sleeping	Percentage of people with malaria	
		Who use mosquito nets when sleeping	Who do NOT use mosquito nets when sleeping
476	426	1.2	40

A newspaper made the following statement:

'Study shows mosquito nets are scientifically proven to prevent malaria.'

0 2 . 2 Give **one** piece of evidence that supports the statement.

[1 mark]

0 2 . 3 Suggest **one** reason why the statement may **not** be valid.

[1 mark]

Table 2 shows information about the number of deaths from malaria in the same area of Africa.

Table 2

Year	Number of deaths from malaria per 100 000 people
2005	161
2007	136
2009	114
2011	97
2013	94
2015	92

0 2 . 4 Predict the number of people per 100 000 who died from malaria in 2017 if the trend stayed the same.

[1 mark]

Number of people per 100 000 = _____

0 2 . 5 Use of mosquito nets has helped to reduce the number of deaths from malaria each year.

Suggest **one** other reason for the reduced number of deaths from malaria each year.

[1 mark]

_____

_____

0 2 . 6 Describe how the human body:

- prevents pathogens from entering
- defends itself against pathogens inside the body.

[6 marks]