

Diseases and immunity – 2023 November IGCSE 0610

1. Nov/2023 /Paper_ 0610/11/No.19

Which type of cells produce antibodies?

- A ciliated cells
- B platelets
- C red blood cells
- D white blood cells

2. Nov/2023 /Paper_ 0610/11/No.20

What is an example of a transmissible disease?

- A coronary heart disease caused by eating a high fat diet
- B AIDS
- C liver disease caused by excessive alcohol consumption
- D scurvy

3. Nov/2023 /Paper_ 0610/11/No.29

Which diseases can be successfully treated with antibiotics?

	diseases caused by bacteria	ricketts	diseases caused by viruses
A	✓	✓	✓
B	✓	x	x
C	x	✓	x
D	x	x	✓

key

✓ = can be treated

x = cannot be treated

4. Nov/2023 /Paper_ 0610/11/No.32

What can be used to reduce the transmission of HIV?

	face masks	screening blood donors	sterile needles for drug users	washing hands
A	✓	x	x	x
B	x	✓	✓	x
C	x	x	✓	✓
D	✓	✓	x	x

key

✓ = can be used to reduce transmission

x = cannot be used to reduce transmission

5. Nov/2023 /Paper_ 0610/13/No.20
What are disease-causing organisms?

- A antibodies
- B pathogens
- C phagocytes
- D vaccines

6. Nov/2023 /Paper_ 0610/21/No.20

A patient was injected with antibodies after being bitten by a poisonous snake. The patient recovered and survived.

What describes the effect of the injection in the patient's body?

	active immunity	passive immunity	memory cells produced
A	✓	x	✓
B	✓	x	x
C	x	✓	✓
D	x	✓	x

key

✓ = yes

x = no

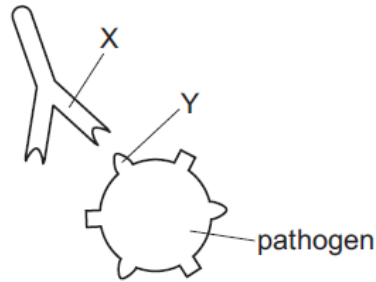
7. Nov/2023 /Paper_ 0610/21/No.19
What is the role of lymphocytes in the blood?

- A antibody production
- B blood clotting
- C phagocytosis
- D oxygen transport

8. Nov/2023 /Paper_ 0610/22/No.20

When a pathogen enters the blood, the immune system uses different mechanisms to destroy the pathogen.

The diagram shows one of these mechanisms.



Which row describes the structures involved?

	structure X	X is made by	structure Y
A	antigen	lymphocytes	antibody
B	antigen	phagocytes	antibody
C	antibody	lymphocytes	antigen
D	antibody	phagocytes	antigen

9. Nov/2023 /Paper_ 0610/23/No.20

Cholera infection can cause the following events.

- 1 Cells lining the small intestine secrete chloride ions.
- 2 Cholera bacteria produce a toxin.
- 3 Chloride ions move into the small intestine.
- 4 Water from the blood moves into the small intestine by osmosis.
- 5 Water potential of fluid in the small intestine becomes lower.

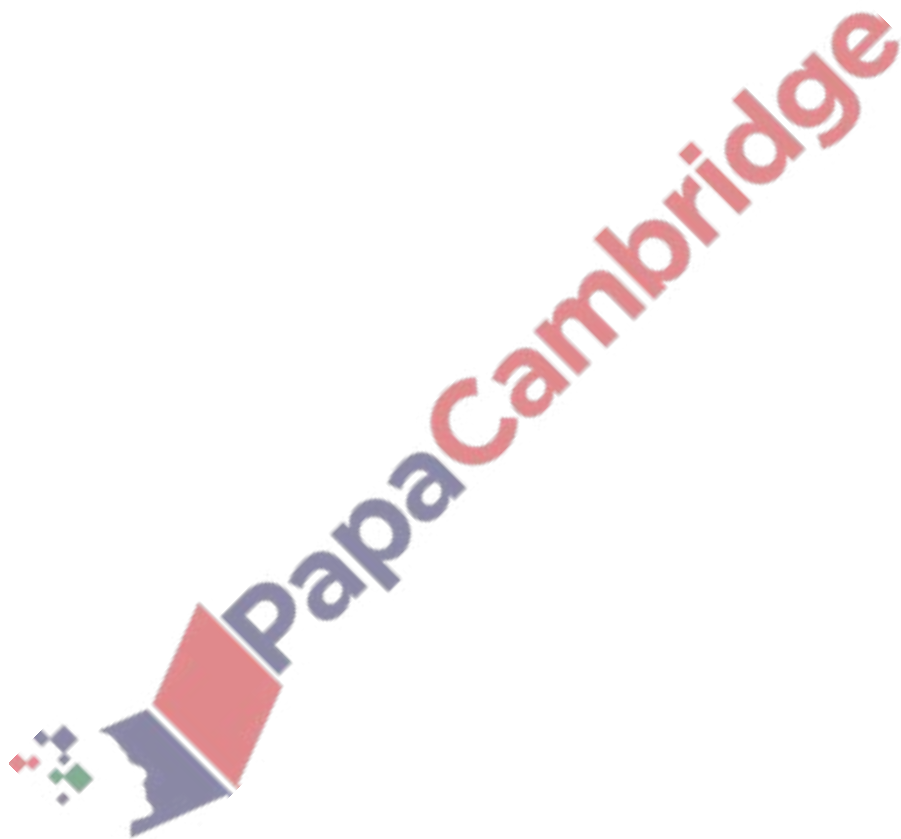
Which sequence of events will cause diarrhoea?

- A** 1 → 3 → 2 → 4 → 5
- B** 2 → 1 → 3 → 5 → 4
- C** 3 → 1 → 4 → 5 → 2
- D** 2 → 3 → 1 → 4 → 5

10. Nov/2023 /Paper_ 0610/23/No.21

Which row shows the composition of expired air from a healthy person?

	carbon dioxide %	oxygen %	water vapour
A	0.04	21	saturated
B	0.04	16	variable
C	4	21	variable
D	4	16	saturated



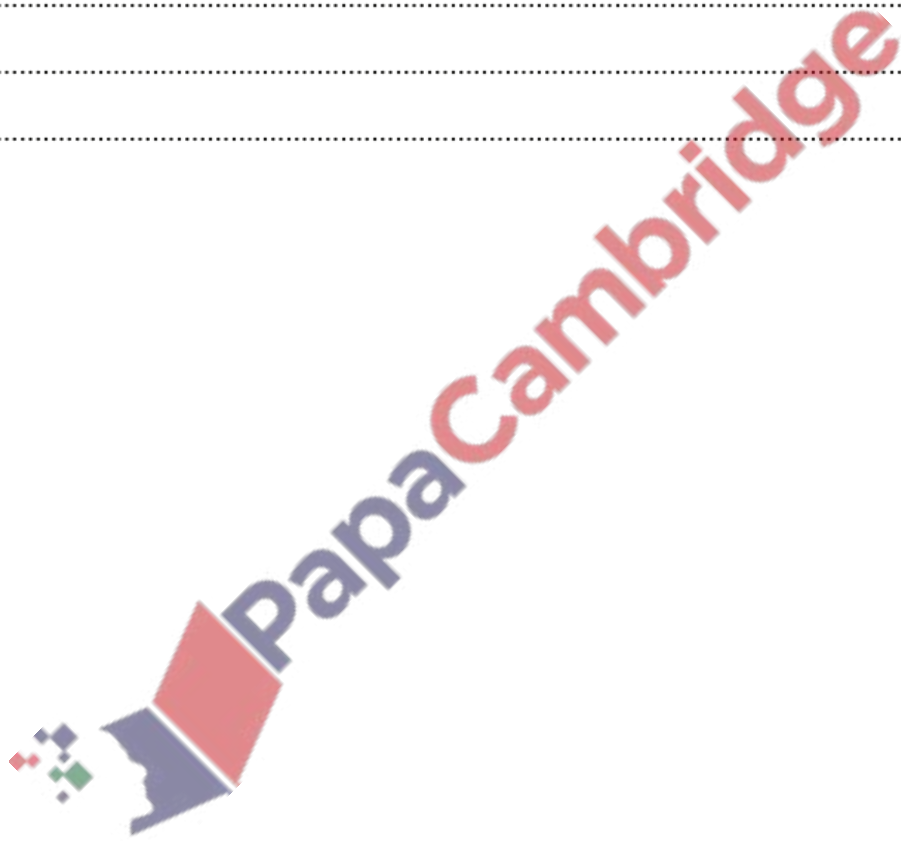
(a) HIV infection can lead to AIDS.

(i) State the words that the letters HIV represent.

..... [1]

(ii) Describe ways of reducing the risk of a person becoming infected with HIV.

.....
.....
.....
.....
.....
.....
.....
..... [3]



(b) Chlamydia, gonorrhoea and syphilis are sexually transmitted infections (STIs).

Table 7.1 shows the numbers of people infected with these STIs in one country from 2014 to 2018.

Table 7.1

year	number of people infected		
	chlamydia	gonorrhoea	syphilis
2014	1 400 000	350 000	19 000
2016	1 600 000	468 000	27 000
2018	1 800 000	583 000	35 000

(i) The list shows some conclusions.

Place ticks (✓) in the boxes to identify **two** correct conclusions for the data shown in Table 7.1.

In 2014, there were 1 050 000 more people infected with chlamydia than were infected with gonorrhoea in 2014.	
In 2016, the number of people infected with chlamydia was three times greater than the number of people infected with gonorrhoea.	
In 2018, more people were infected with syphilis than with gonorrhoea.	
The number of people with STIs has increased each year.	
Between 2016 and 2018, the number of people infected with syphilis increased by 16 000.	

[2]

(ii) Syphilis can be treated with antibiotics.

Suggest the type of organism that causes syphilis.

..... [1]

[Total: 7]