

## Diseases and immunity – 2020 IGCSE 0610

1. **Nov/2020/Paper\_11/No.20**

Which component of the blood releases antibodies in response to an infection by bacteria?

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

2. **Nov/2020/Paper\_11/No.21**

Which 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/2020/Paper\_12/No.21**

Which is an example of a transmissible disease?

- A coronary heart disease due to eating high fat food
- B cholera after drinking contaminated water
- C liver damage due to drinking alcohol
- D lung cancer due to inhaling tobacco smoke

4. **Nov/2020/Paper\_13/No.21**

The list shows some processes that happen in the human body.

- 1 water enters cells by osmosis
- 2 muscles contract
- 3 impulses travel along neurones
- 4 oxygen diffuses into cells

Which of these require energy released by respiration?

- A 2 only
- B 1 and 3 only
- C 2 and 3 only
- D 1, 2, 3 and 4

5. **Nov/2020/Paper\_13/No.31**

Which method of birth control would also help to protect against HIV?

- A condom
- B contraceptive pill
- C diaphragm
- D IUD

6. Nov/2020/Paper\_21/No.19

The sequence of amino acids in antibodies enables them to complete which function?

- A bind to a specific antigen
- B bind to all pathogens
- C perform phagocytosis
- D confer passive immunity for all diseases

7. Nov/2020/Paper\_22/No.19

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

What describes the effect 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

8. Nov/2020/Paper\_23/No.19

A baby acquires protection from pathogens from its mother's breast milk.

What is this protection called?

- A active immunity
- B immunisation
- C vaccination
- D passive immunity



(a) A scientist investigated how the growth of plant shoots was affected by the direction of light.

A light source was placed on one side of a shoot and the scientist recorded the appearance of the shoot after a few days.

Fig. 4.1 shows his results.

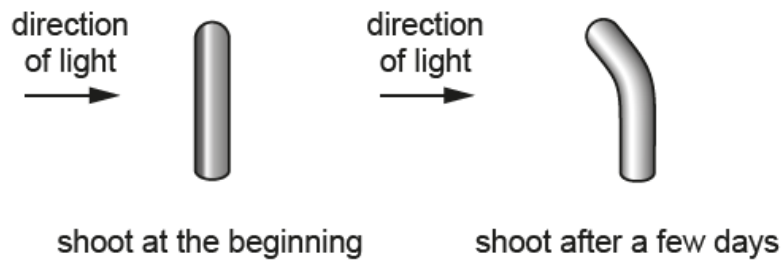


Fig. 4.1

(i) Describe the results shown in Fig. 4.1.

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.....  
..... [1]

(ii) State the name of the response to light shown in Fig. 4.1.

..... [1]

(iii) Explain the advantage to a plant of the response shown in Fig. 4.1.

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..... [2]

(b) Plant roots absorb mineral ions by active transport.

(i) Define the term active transport.

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

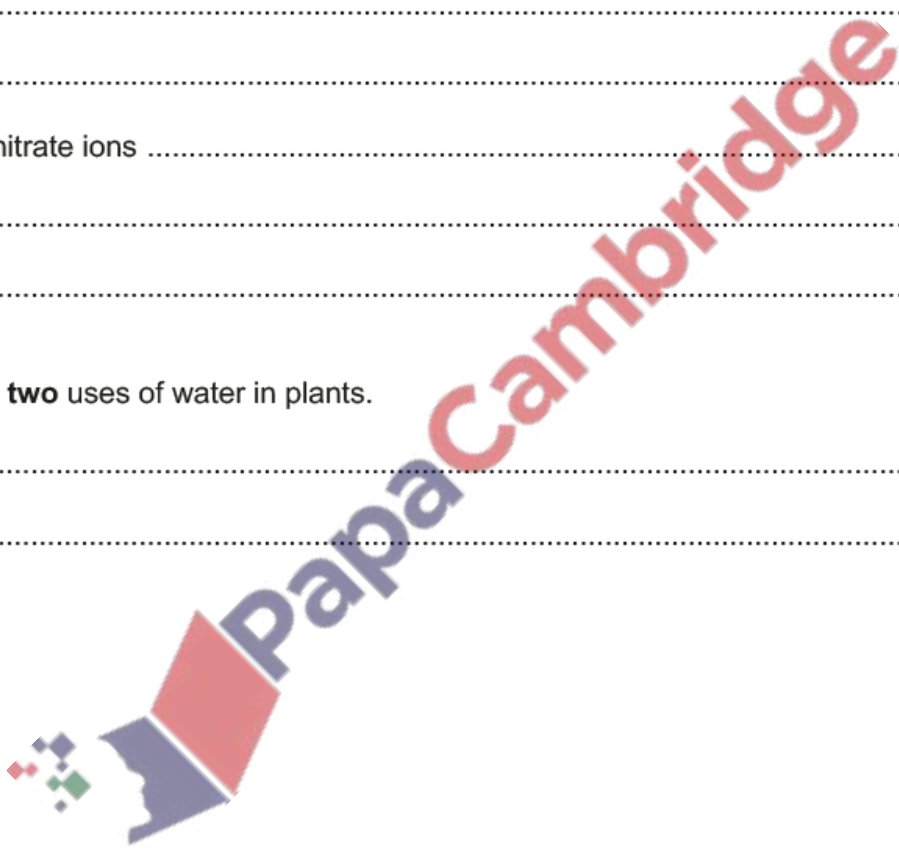
(ii) State the importance of these mineral ions in plants.

magnesium ions .....  
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nitrate ions .....  
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..... [2]

(c) State **two** uses of water in plants.

1 .....  
2 ..... [2]

[Total: 11]



(a) Define the term drug.

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..... [2]

(b) Antibiotics are a type of drug.

State the type of infection antibiotics are used to treat.

..... [1]

(c) Table 6.1 shows the year in which three different types of antibiotics were first used and the year that antibiotic resistance was first detected.

**Table 6.1**

antibiotic	year of first use	year resistance first detected
<b>A</b>	1952	1988
<b>B</b>	1962	1973
<b>C</b>	2000	2003

Compare the data for the three antibiotics in Table 6.1.

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..... [3]

(d) The body has defences against infections caused by pathogens.

State **three** body defences that prevent pathogens from entering the body.

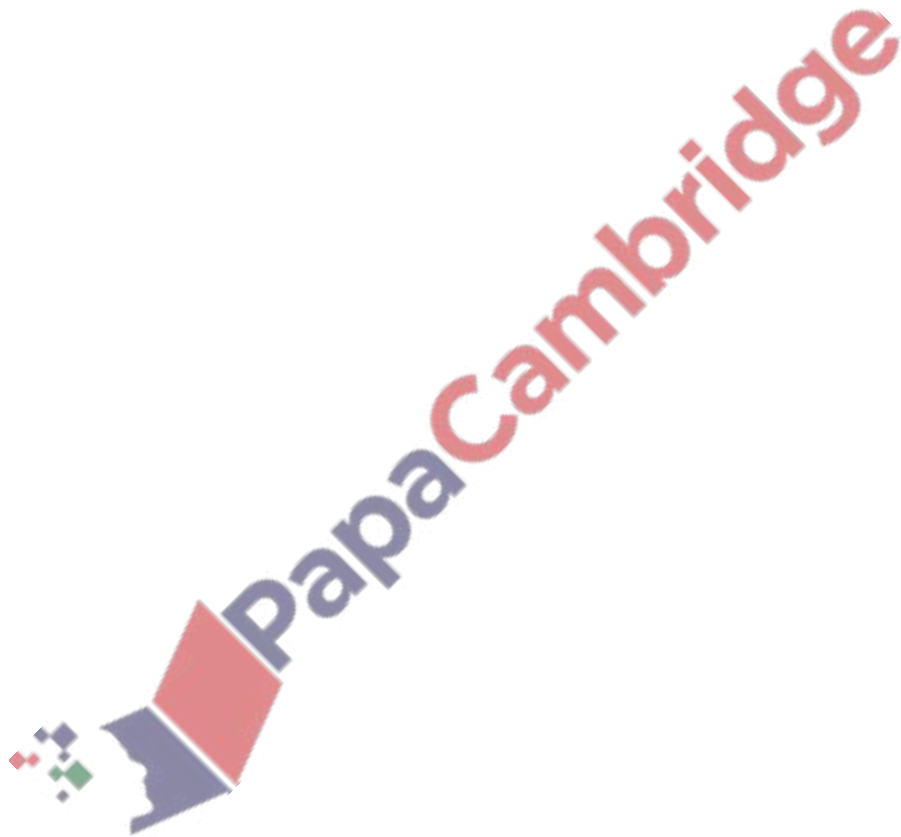
1 .....

2 .....

3 .....

[3]

[Total: 9]



(a) Fig. 2.1 shows some cells that are part of the human immune system. These cells are responding to one type of pathogen.

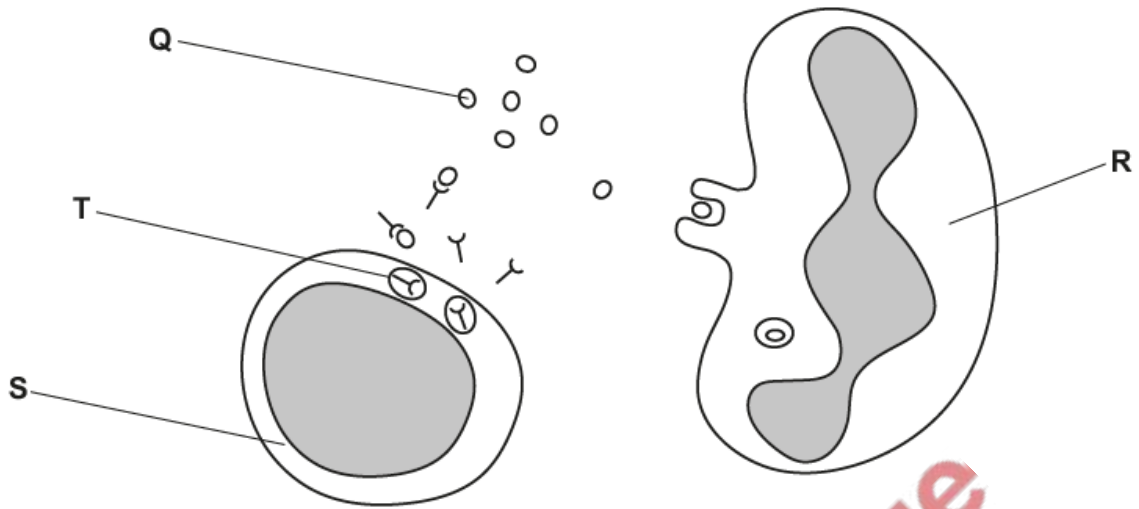


Fig. 2.1

Explain how the immune system responds to an invasion of pathogens.

Use the letters in Fig. 2.1 in your answer.

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(b) A vaccine was introduced in 1942 for a particular disease.

Fig. 2.2 shows the effect of introducing the vaccine on the number of cases of the disease in one country.

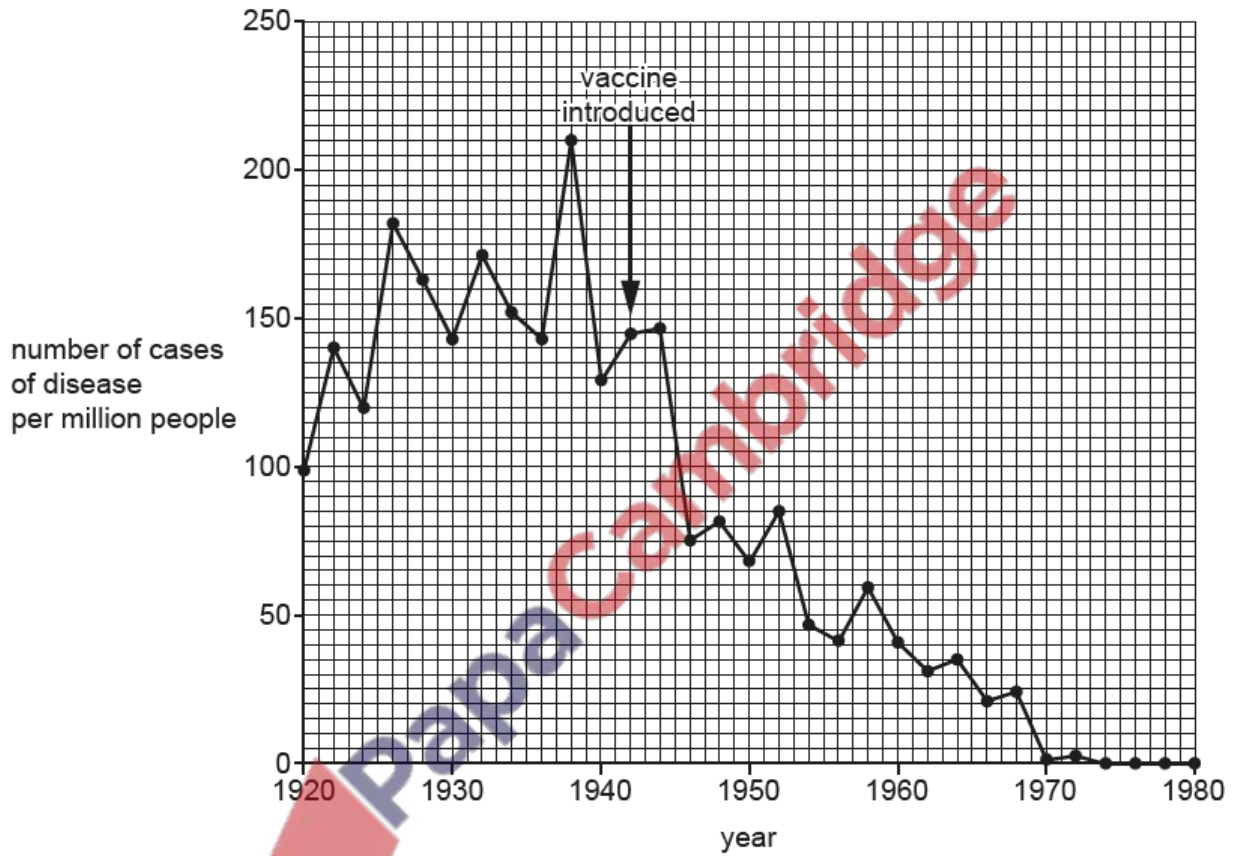


Fig. 2.2



In 1946 the government of the country concluded that the vaccine was successful.

Discuss the evidence, shown in Fig. 2.2, for **and** against this conclusion.

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[4]

[Total: 10]

