

Blood and the immune system: practice questions

5 questions · 14 marks · mark scheme at the back

For Edexcel International GCSE Science (Double Award) 4SD0.

Name

Total / 14

1 State the four components of blood.

[4 marks]

2 Plasma transports many substances around the body. Give three substances that are transported by plasma.

[3 marks]

3 Which feature of a red blood cell increases the amount of oxygen it can carry?

[1 mark]

- A. ☐ A large nucleus
- B. ☐ A thick cell wall
- C. ☐ Haemoglobin inside the cell
- D. ☐ Many mitochondria

4 Explain how three adaptations of red blood cells make them suitable for transporting oxygen.

[3 marks]

5 Lymphocytes release antibodies when a pathogen enters the body. Explain why an antibody that works against one pathogen does not work against a different pathogen. **[3 marks]**

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Mark scheme

One mark for each point unless a maximum is given. Words in brackets are not needed for the mark.

1. [4]

- red blood cells (1)
- white blood cells (1)
- platelets (1)
- plasma (1)

2. [3]

- carbon dioxide (1)
- digested food / glucose / amino acids (1)
- urea (1)
- hormones (1)
- heat energy (1)
- Max 3

3. [1]

C C (1)

4. [3]

- biconcave shape gives a large surface area for oxygen to diffuse in and out (1)
- no nucleus, so there is more room for haemoglobin (1)
- contains haemoglobin which combines with oxygen (1) allow forms oxyhaemoglobin

5. [3]

- antibodies are specific (1)
- the shape of the antibody fits the antigen on that pathogen only (1)
- a different pathogen has different antigens, so a different antibody is needed (1)