

Diseases and immunity practice questions

8 questions • 20 marks • mark scheme at the back

For Cambridge IGCSE Combined Science 0653. **Supplement** is Extended content, only examined on Papers 2 and 4.

Name

Total / 20

Pathogens and transmission **Spec B10.1**

1 What is a pathogen? [1 mark]

- A. ☐ A disease-causing organism
- B. ☐ A protein that fights disease
- C. ☐ A cell that engulfs bacteria
- D. ☐ A chemical that kills bacteria

2 Define the term transmissible disease and give two ways in which a pathogen can be transmitted indirectly. [3 marks]

3 Which is an example of transmission by direct contact? [1 mark]

- A. ☐ Breathing in droplets from the air
- B. ☐ Eating contaminated food
- C. ☐ Passing a pathogen in blood
- D. ☐ Touching a contaminated door handle

4 Describe four ways the body defends itself against pathogens. [4 marks]

5 Supplement [4 marks]

Explain why a clean water supply and sewage treatment are important in controlling the spread of disease.

[illegible]

6 **Supplement** **[1 mark]**

Which action helps to stop pathogens spreading from hands to food?

- A. ☐ Washing hands before preparing food
- B. ☐ Keeping food in sunlight
- C. ☐ Eating food quickly
- D. ☐ Adding salt to water

7 Supplement [3 marks]

Explain how poor waste disposal could increase the spread of a transmissible disease.

[illegible]

Immunity Spec B10.1 Supplement

8 **Supplement** **[3 marks]**

Define active immunity and state two ways in which it can be gained.

[illegible]

Mark scheme

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

1. [1]

A A (1)

2. [3]

- a disease in which the pathogen can be passed from one host to another (1)
- contaminated surfaces / food / animals / air (1)
- any second different indirect route, e.g. contaminated food (1)
- allow water for food; ignore touching without reference to a surface
- Max 3

3. [1]

C C (1)

4. [4]

- skin forms a barrier / stops pathogens entering (1)
- hairs in the nose trap pathogens / dust (1)
- mucus traps pathogens (1)
- stomach acid kills pathogens (1)
- white blood cells destroy pathogens / ingest / make antibodies (1)
- Max 4

5. [4] **Supplement**

- water can contain pathogens / be contaminated (1)
- clean (treated) water has the pathogens removed / killed (1)
- so people do not swallow pathogens in drinking water (1)
- sewage contains pathogens (1)
- treating sewage stops it contaminating drinking water / food (1)
- Max 4

6. [1] **Supplement**

A A (1)

7. [3] **Supplement**

- waste may contain pathogens (1)
- pathogens can contaminate food / water / surfaces (1)
- people then take in the pathogens / pathogens passed to new hosts (1)
- allow animals attracted to waste spread the pathogens

8. [3] **Supplement**

- defence against a pathogen by antibody production in the body (1)
- after an infection by a pathogen (1)
- by vaccination (1)