

Full Higher Separate content. ★ = Higher Tier. ◆ = Separate Science only.

Q1. Name the type of pathogen causing: (a) malaria, (b) tuberculosis, (c) rose black spot, (d) influenza.

[4 marks]

Q2. Explain the difference in how bacteria and viruses cause disease.

[3 marks]

Q3. Describe how malaria is transmitted. Suggest TWO methods of reducing its spread.

[3 marks]

Total: 10 marks

Q1 (4 marks)

Name the type of pathogen causing: (a) malaria, (b) tuberculosis, (c) rose black spot, (d)...

- (a) Protist [1]
- (b) Bacterium [1]
- (c) Fungus [1]
- (d) Virus [1]

Q2 (3 marks)

Explain the difference in how bacteria and viruses cause disease.

- Bacteria reproduce in the body and release toxins — it is the toxins that cause symptoms [1]
- Viruses invade host cells, replicate using the cell's own machinery [1]
- Host cells are destroyed when viruses are released (cell lysis) — cell death causes symptoms [1]

Q3 (3 marks)

Describe how malaria is transmitted. Suggest TWO methods of reducing its spread.

- Malaria is caused by Plasmodium (a protist) transmitted by bites of female Anopheles mosquito (vector) [1]
- Prevention: insecticide-treated mosquito nets [1]
- Draining stagnant water — removes mosquito breeding sites / indoor spraying with insecticide [1]