

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

**Q1. For EACH of the following diseases, state the pathogen type, how it spreads and ONE symptom: (a) measles, (b) HIV/AIDS.**

[4 marks]

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**Q2. Describe how gonorrhoea is spread and why it is becoming harder to treat.**

[3 marks]

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**Q3. Describe how Tobacco Mosaic Virus (TMV) affects plant growth.**

[2 marks]

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**Total: 9 marks**

**Q1 (4 marks)**

*For EACH of the following diseases, state the pathogen type, how it spreads and ONE sympto...*

- (a) Measles: virus; spreads by droplets (coughing/sneezing); fever / red skin rash [1]
- Serious complication: can be fatal, especially in children with weakened immune systems [1]
- (b) HIV: virus; spreads by sexual contact or infected blood/needles; initially flu-like symptoms then weakening of immune system [1]
- HIV destroys CD4+ T cells → AIDS — opportunistic infections become life-threatening [1]

**Q2 (3 marks)**

*Describe how gonorrhoea is spread and why it is becoming harder to treat.*

- Gonorrhoea is a bacterial infection spread by sexual contact [1]
- Symptoms: thick yellow/green discharge, pain on urination [1]
- Antibiotic resistance: some strains resistant to most common antibiotics (through natural selection) [1]

**Q3 (2 marks)**

*Describe how Tobacco Mosaic Virus (TMV) affects plant growth.*

- TMV infects plant cells and disrupts chlorophyll production → mosaic pattern on leaves [1]
- Reduced chlorophyll → reduced photosynthesis → reduced growth and yield [1]