

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

**Q1. State the seven levels of the Linnaean classification system in order from largest to smallest.**

[1 mark]

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**Q2. Define the term species and explain how two populations become different species (speciation).**

[2 marks]

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★ HIGHER TIER

**Q3. ★ Explain why the three-domain system replaced the five-kingdom classification. Name the three domains.**

[3 marks]

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**Total: 6 marks**

**Q1 (1 mark)**

*State the seven levels of the Linnaean classification system in order from largest to smallest.*

- Kingdom → Phylum → Class → Order → Family → Genus → Species [1]

**Q2 (2 marks)**

*Define the term species and explain how two populations become different species (speciation).*

- Species: a group of organisms that can interbreed to produce fertile offspring [1]
- Speciation: populations become reproductively isolated → evolve separately → cannot interbreed [1]

**Q3 (3 marks) [★ HT]**

*★ Explain why the three-domain system replaced the five-kingdom classification. Name the three domains.*

- Three domains: Archaea, Bacteria, Eukarya [1]
- Based on ribosomal RNA (rRNA) sequences — more reliable genetic evidence than just physical appearance [1]
- Separated Archaea (extremophile bacteria-like) from true bacteria — they are as different from bacteria as from eukaryotes [1]