Higher Combined version — Higher Tier (★) included; Separate-only (◆) removed.

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

[1 mark]

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

[2 marks]

★ HIGHER TIER

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

[3 marks]

Total: 6 marks

E: Classification

Q1 (1 mark)

State the seven levels of the Linnaean classification system in order from largest to smal…

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

Q2 (2 marks)

Define the term species and explain how two populations become different species (speciati…

• 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 t…

• 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]