

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

Q1. Explain how speciation occurs through geographic isolation.

[4 marks]

★ HIGHER TIER

Q2. ★ Explain what is meant by reproductive isolation.

[2 marks]

Total: 6 marks

Q1 (4 marks)

Explain how speciation occurs through geographic isolation.

- Geographic barrier divides population → two isolated groups [1]
- Different selection pressures in each environment [1]
- Different alleles selected → populations diverge genetically [1]
- Eventually cannot interbreed even if reunited → new species [1]

Q2 (2 marks) [★ HT]

★ Explain what is meant by reproductive isolation.

- Two populations cannot successfully interbreed [1]
- May be due to geographic barrier, different mating seasons, behavioural differences, or genetic incompatibility [1]