

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

Q1. Compare sexual and asexual reproduction in terms of genetic variation, number of parents and type of cell division.

[3 marks]

Q2. Give TWO advantages of asexual reproduction and TWO advantages of sexual reproduction.

[2 marks]

Total: 5 marks

Q1 (3 marks)

Compare sexual and asexual reproduction in terms of genetic variation, number of parents a...

- Asexual: ONE parent, offspring genetically identical (clones), uses mitosis [1]
- Sexual: TWO parents, offspring genetically different, uses meiosis [1]
- Asexual: no variation — advantageous in stable environments; sexual: variation — advantageous in changing environments [1]

Q2 (2 marks)

Give TWO advantages of asexual reproduction and TWO advantages of sexual reproduction.

- Asexual advantages (any 2): fast, energy-efficient (no mate needed), all offspring can reproduce, identical offspring preserve successful genotype [1]
- Sexual advantages (any 2): genetic variation, better adaptation to changing environments, less susceptible to new diseases [1]