Mark schemes

Q1.

(a) **Level 3:** Relevant points (reasons / causes) are identified, given in detail and logically linked to form a clear account.

5–6

Level 2: Relevant points (reasons / causes) are identified, and there are attempts at logical linking. The resulting account is not fully clear.

3–4

Level 1: Points are identified and stated simply, but their relevance is not clear and there is no attempt at logical linking.

1–2

No relevant content

0

Indicative content

Fossil evidence:

- fossils show evidence of life in the past
- fossils show change over time
- fossil record shows development of species over time
- fossils show evidence of extinction
- fossil record shows how organisms from the past are related to species alive today

- gaps in fossil record
- gaps in fossil record are being filled in with new evidence
- ref to evolutionary trees
- description of how fossils are formed

Genetics:

- ref to Mendel's breeding experiments with plants
- Mendel's description / idea of units / factors of inheritance
- dominant and recessive units / alleles / genes
- observation of chromosome behaviour during cell division
- chromosome behaviour and Mendel's units work in similar ways
- structure of DNA worked out
- gene mechanism in determining protein synthesis worked out

- (genetic) variation in a species
- (variation) due to mutation or change in gene (structure)
- individuals with advantageous characteristics more likely to survive
- individuals with advantageous characteristics more likely to reproduce
- (survivors) pass on (advantageous) alleles / genes
- eg of evolution (such as antibiotic resistance in bacteria)
- new species arise when sufficient changes occur to prevent (successful) reproduction

For **Level 3**, the response must include details about fossils and about the mechanisms of genetics

For **Level 2**, the response should include descriptions about fossils and / or genetics

[6]