

Conservation: practice questions

8 questions · 28 marks · mark scheme at the back

For Cambridge IGCSE Biology 0610 (and 0970, which has the same content). **Supplement** is Extended content, only examined on Papers 2 and 4.

Name

Total / 28

1 Define the term sustainable resource. [2 marks]

2 Explain why the tiger is an endangered species. [4 marks]

3 Describe four ways in which an endangered species can be conserved. [4 marks]

4

Supplement

[4 marks]

Explain how fish stocks can be conserved using quotas, closed seasons and mesh size.

5

Supplement

[3 marks]

Explain how replanting and protected areas help to conserve forests.

6

Supplement

[4 marks]

Describe how artificial insemination (AI) and in vitro fertilisation (IVF) are used in captive breeding programmes.

7

Supplement

[3 marks]

Describe three reasons for conservation programmes.

8

Supplement

[4 marks]

The population of a rare plant species has fallen to a few individuals. Explain the risks to the species of this reduced genetic variation.

Mark scheme

One mark for each point unless a maximum is given. Words in brackets are not needed for the mark.

1. [2]

- a resource that is produced as rapidly as it is removed from the environment (1)
- so that it does not run out (1)

2. [4]

- habitat destruction / forests cleared (1)
- so less food / shelter / breeding sites (1)
- hunting / killed for body parts faster than they reproduce (1)
- any other valid: climate change / pollution / introduced species / overharvesting of prey (1)

3. [4]

- monitoring populations (1)
- protecting species and habitats / reserves (1)
- education (1)
- captive breeding programmes (1)
- seed banks for plants (1)
- Max 4

4. [4] **Supplement**

- quotas limit the number or mass caught, so fish are not removed faster than they reproduce (1)
- closed seasons: no fishing in breeding season (1)
- so fish can breed / reproduce (1)
- larger mesh size lets young fish escape (1)
- so they grow and breed later (1)
- Max 4

5. [3] **Supplement**

- replanting replaces trees that were felled (1)
- so forest cover / timber supply is sustained (1)
- protected areas: trees cannot be cut down (1)
- so habitats / species are kept (1)
- Max 3

6. [4] **Supplement**

- AI: sperm collected from male and placed into female (1)
- allows breeding between animals that are far apart / will not mate (1)
- IVF: egg fertilised by sperm outside body / in a laboratory (1)
- embryo put into female (of same or related species) to develop (1)

7. [3] Supplement

- maintain or increase biodiversity (1)
- reduce extinction (1)
- protect vulnerable ecosystems (1)
- maintain nutrient cycling (1)
- maintain resource provision: food / drugs / fuel / genes (1)
- Max 3

8. [4] Supplement

- fewer alleles / less variation in the population (1)
- if a new disease arrives, few or no individuals may be resistant (1)
- so the whole population could be killed (1)
- if the environment changes, no individuals may be adapted to it (1)
- so the species is less able to survive / may become extinct (1)
- Max 4