18.3 Conservation

Name: _____ Class: _____ Date: _____ **Total: 26 marks**

KEY WORDS conservation • endangered species • extinct • invasive species • seed bank

Objective

Build the skills to answer exam questions on **conservation** – why species become **extinct** , ways to conserve them, **assisted reproduction** , **invasive species** , and the roles of **IUCN** and **CITES**.

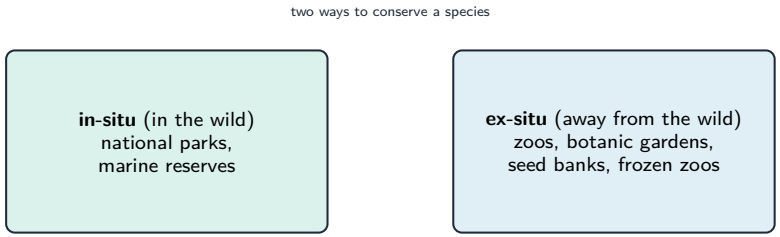
You must be able to:

- explain the causes of extinction and reasons to maintain biodiversity
- outline conservation methods (in-situ and ex-situ) and assisted reproduction
- explain the control of invasive species and the roles of IUCN and CITES

1 Key knowledge and worked examples

Extinction and conserving species

Species become **extinct** through **climate change** , competition (often from invasive species), hunting by humans, and habitat loss. We maintain biodiversity because species give food, medicines and materials, keep ecosystems stable, and have value in themselves.



Conservation is in-situ (protect in the wild habitat) or ex-situ (keep and breed away from the wild)

Conservation protects biodiversity at every level

- **in-situ** : protected areas – national parks, marine parks.
- **ex-situ** : **zoos** , **botanic gardens** , **seed banks** , 'frozen zoos'.

Assisted reproduction and invasive species

For rare mammals: **IVF** , **embryo transfer** , **surrogacy** . **Invasive species** are controlled because they out-compete native species. **IUCN** lists how threatened each species is; **CITES** controls international trade in endangered species.

2 Practice

2.1 State **two** causes of extinction. [2]

2.2 State the difference between in-situ and ex-situ conservation. [2]

3 Exam-style questions

3.1 Which is an example of **ex-situ** conservation? [1]

- **A** a national park
- **B** a marine reserve
- **C** a seed bank
- **D** a protected wetland

3.2 What is the role of CITES? [1]

- **A** to list how threatened each species is
- **B** to control the international trade in endangered species
- **C** to run IVF programmes
- **D** to remove invasive species

3.3 (a) Explain why invasive species are controlled in conservation. [2]

(b) Outline how a seed bank helps to conserve plant species. [2]

3.4 Explain **two** reasons why maintaining biodiversity is important. [2]

3.5 A large island lost 60% of its native bird species after rats arrived with visiting ships.

(a) Explain **three** ways in which an invasive species can drive native species to extinction. [3]

(b) Describe **two** methods of conserving a species **in situ** and **two** methods **ex situ**, and state one advantage of each approach. [6]

(c) Explain how assisted reproduction helps to conserve a species with a very small population. [2]

(d) Explain why maintaining genetic diversity, and not just numbers, matters in a conservation programme. [3]