

9.8 Invasive Species

Name: _____ Class: _____ Date: _____

Total: 9 marks

Objective

Build the skills to answer exam questions on **invasive species**.

You must be able to:

- define an **invasive species** 入侵物种
- explain why they spread and their impacts
- suggest control methods

1 Worked examples

Study these first. Each one shows the method for a question type used later —follow the steps and you can do the Practice and Exam-style questions yourself.

■ What they are

An **invasive species** is a non-native species that spreads rapidly and harms the new ecosystem, economy, or health.

■ Why they succeed

They often have **no natural predators** in the new area, reproduce fast, and out-compete or prey on natives —so their populations explode.

■ Impacts

- **Outcompete** or eat native species (biodiversity loss).
- Disrupt food webs.
- Cause economic damage (crops, infrastructure).

■ Control methods

- **Prevention** (best) —inspections, ballast-water rules.
- **Mechanical/physical** removal, **biological** control (a natural predator, carefully chosen), and targeted chemicals.

■ A worked example

A fish introduced to a lake with no predators multiplies and eats native species, collapsing their populations —an invasive-species impact.

2 Practice

Now apply the methods above.

2.1 Define an invasive species. [1]

2.2 Why do invasive species often spread rapidly? [1]

2.3 State one method to control invasive species. [1]

3 Exam-style questions

3.1 Invasive species often thrive because they [1]

- **A** have many local predators
 - **B** lack natural predators in the new area
 - **C** reproduce slowly
 - **D** are always producers
-

3.2 An invasive plant spreads across a wetland.

(a) Explain two impacts on the native ecosystem. [2]

(b) State the best long-term strategy against invasive species. [1]

3.3 Explain one risk of using biological control against an invasive species. [2]

4 Go further

You are now ready for the real exam questions on this subtopic:

- work through the **9.8 Invasive Species** lesson on the **Learn** page;
- read the **Invasive Species** section of the AP Environmental Science handout on the **Know** page.

Solutions

2.1 A non-native species that spreads and harms the new ecosystem.

2.2 They have no natural predators there and reproduce fast, outcompeting natives.

2.3 Any one: prevention, mechanical removal, biological control, chemicals.

3.1 B —lack natural predators in the new area.

3.2 (a) Any two: outcompetes/crowds out natives, disrupts the food web, reduces biodiversity. (b) Prevention (stopping introductions).

3.3 The introduced control organism could itself become invasive, attacking native species and creating a new problem.