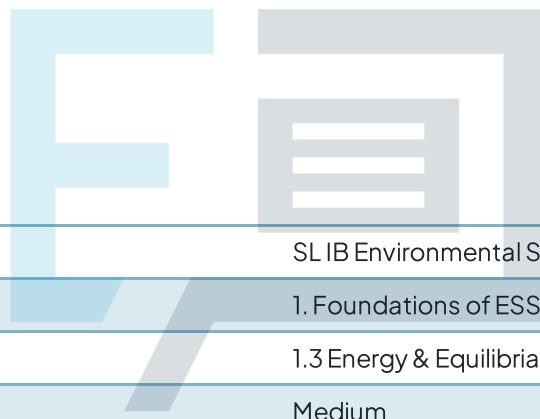




1.3 Energy & Equilibria

Question Paper



Course	SL IB Environmental Systems & Societies (ESS)
Section	1. Foundations of ESS
Topic	1.3 Energy & Equilibria
Difficulty	Medium

Exam Papers Practice

To be used by all students preparing for
SL IB Environmental Systems & Societies (ESS)
Students of other boards may also find this useful

Question 1a

Outline how various factors influence the resilience of an ecosystem.

[4 marks]

Question 1b

Explain how larger populations can affect ecosystem resilience.

[2 marks]

Question 2a

Explain the term *ecological tipping point*.

[2 marks]

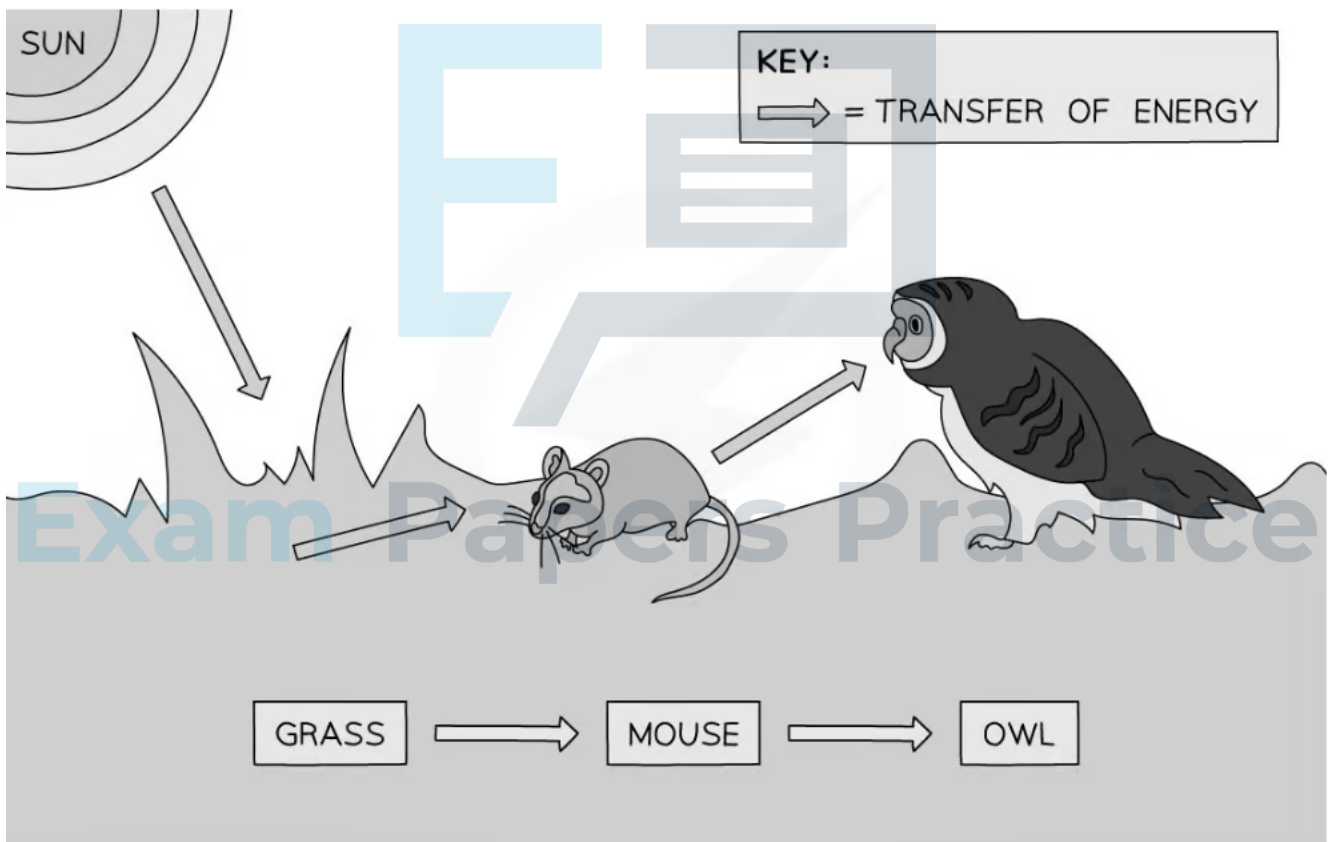
Question 2b

Explain the role of feedback loops in the dynamics of alternate stable states and the occurrence of tipping points between them.

[4 marks]

Question 3a

Describe how the first law of thermodynamics is demonstrated in the figure below, as solar energy flows through the primary producers.



[2 marks]

Question 3b

Explain how the second law of thermodynamics applies to the food chain shown in the figure in part (a).

[2 marks]

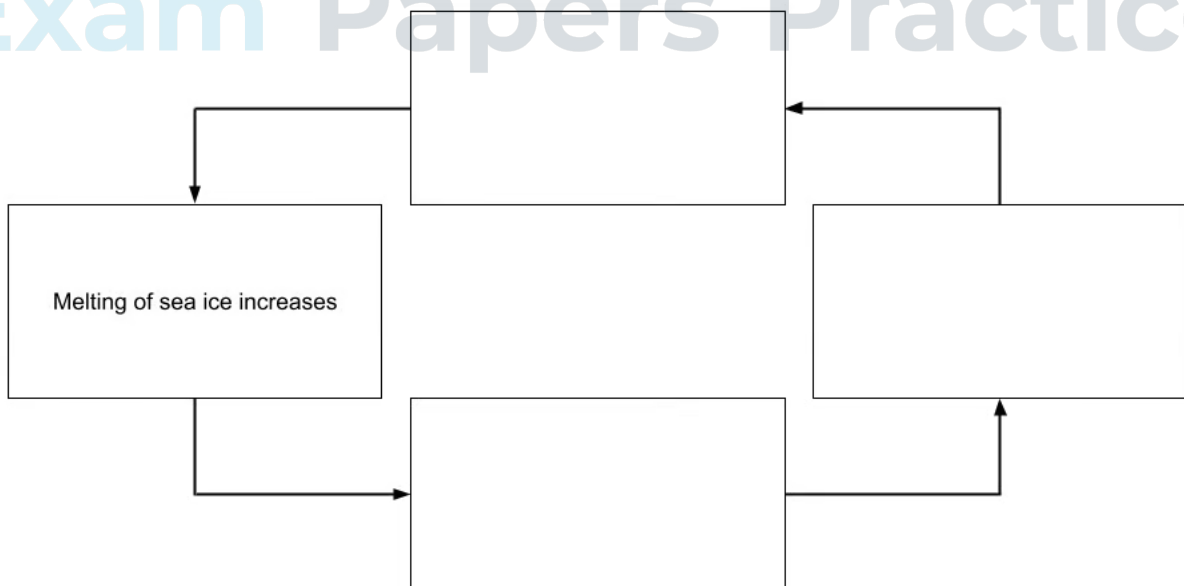
Question 4a

Explain how naturally occurring stratospheric ozone destruction and reformation is an example of negative feedback.

[3 marks]

Question 4b

Complete the diagram to show how a positive feedback process involving melting sea ice may affect the rate of global warming.



[3 marks]



Exam Papers Practice