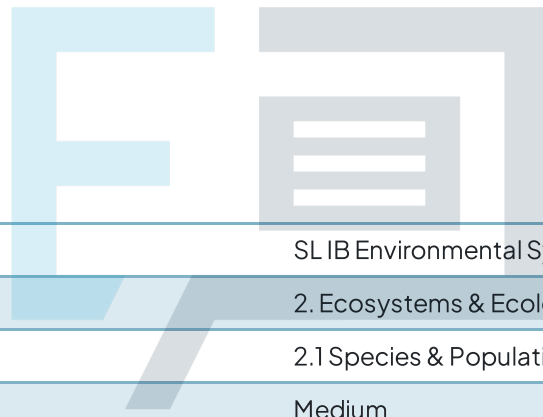




# 2.1 Species & Populations

## Question Paper



Course	SL IB Environmental Systems & Societies (ESS)
Section	2. Ecosystems & Ecology
Topic	2.1 Species & Populations
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 the role of **abiotic** factors and how they influence ecosystems, providing examples to illustrate their impact.

[4 marks]

### Question 1b

Outline the role of **biotic** factors and how they influence ecosystems, providing examples to illustrate their impact.

[4 marks]



Exam Papers Practice

### Question 2a

With reference to a named species, distinguish between the terms *habitat* and *niche*.

[2 marks]

### Question 2b

Distinguish between the terms *fundamental niche* and *realised niche*.

[2 marks]

### Question 3a

Compare and contrast predation and competition.

[4 marks]



### Question 3b

i)  
Define the term *carrying capacity*.

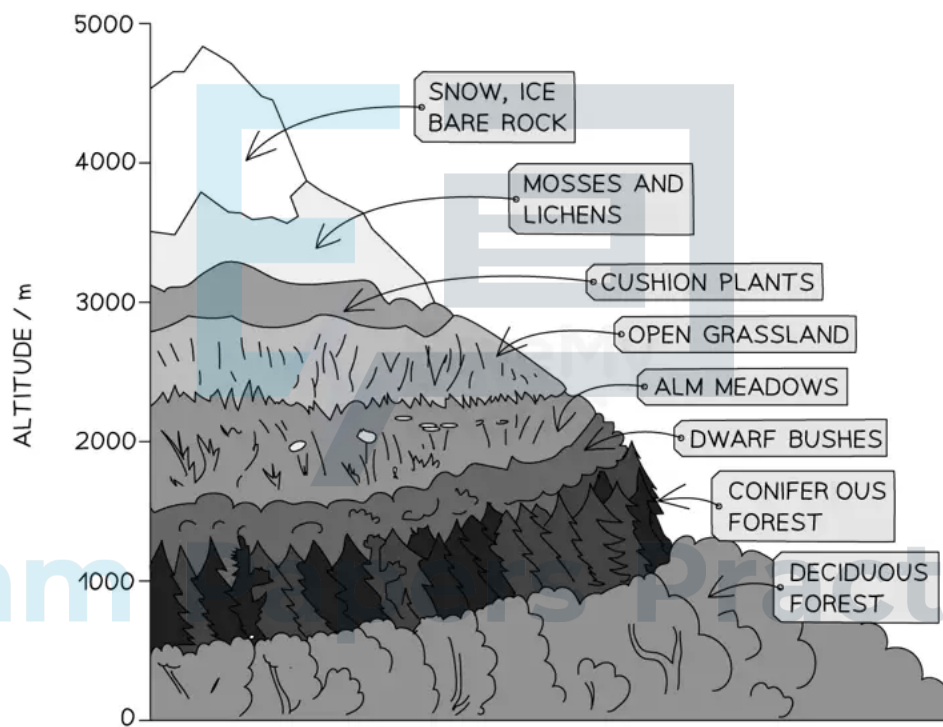
ii)  
Outline **four** factors that contribute to the difficulty in estimating carrying capacity.

At least **two** of these factors should be specific to human populations.

[5 marks]

### Question 4a

The figure below shows how the dominant vegetation changes with altitude in the Alps mountain range in Europe.



Identify **three** limiting factors likely to be affecting alpine vegetation above 2500 m.

[3 marks]

### Question 4b

Explain the role of limiting factors in shaping S and J population curves.

[4 marks]



# Exam Papers Practice