



Topic Tests for GCSE Edexcel B Geography

Component 3: Topic 8:
Forests Under Threat

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Teacher's Introduction

This resource has six tests on Component 3, Topic 8: *Forests under threat*, for the GCSE Edexcel B Geography specification. Every key aspect of the specification is covered in this resource.

These topic tests are designed to test the students' knowledge and enable the teacher to diagnose the students' strengths and weaknesses in certain areas. Each test covers a range of question types, and there is a wide variety of stimulus material. These tests are not intended to mimic exam papers.

Mark schemes for each topic test can be found at the end of this resource. For 'closed' questions, one answer is acceptable, a model answer has been provided. For 'open' and extended questions, a range of acceptable content has been included.

When to Use This Resource

This resource can be used at the end of a particular topic area, or at the end of the whole course for consolidation or knowledge. The students can also use the tests towards the end of the course either before or after revision. There is scope to provide your students with one test per year of the GCSE course over two years.

How to Use This Resource

The tests can be completed individually in class, or set as homework tasks. The tests can be used by the student or the teacher, at home or in the classroom, as answers are provided.

These structured tests provide an opportunity to mark and score students in order to monitor progress. The tests are provided in write-on and non-write-on formats to suit the requirements of the teacher.

The Benefits to the Student

Students can be confident they have been tested on every key aspect of the specification. They will know which areas they are strong in, and which require further work, and can set their own learning. The answer sections also provide students with an indication of what a good answer looks like.

Differentiation

In order to support lower-ability students while pushing the more able, each test has two sections. The first section has approximately 40 marks and has been written to test knowledge of the specification. These questions are for all students and the difficulty or complexity of the questions increases towards the end of the test. The second section has approximately 10 further marks of extension questions for the more able.

Free Updates!

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* resulting from minor specification changes, suggestions from teachers and peer reviews, or occasional errors reported by customers

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Test 2 – Threats to the Rainforests

1. Give a definition for the term 'deforestation'.

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2. Distinguish between commercial and subsistence farming.

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3. The aerial photograph shows the process of deforestation in the Amazon.

Suggest **two** possible causes of this deforestation, and identify **two** problems that this may cause.



Cause 1:

Cause 2:

Effect 1:





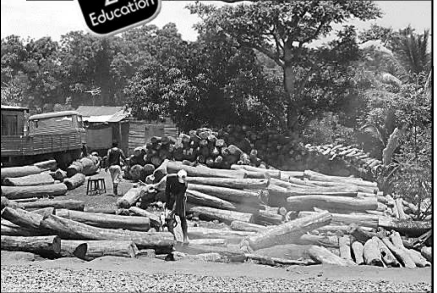
Effect 2:

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- 4a. Complete the table below which shows four causes of rainforest destruction and provide **two** ways that damage **to the environment** is caused by the

	Identification	
		1. 2.
 or 		1. 2.
		1. 2.
		1. 2.

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4b. Describe **two** economic impacts and **two** social impacts caused by the clearing of rainforests.

Economic impacts:

1.
2.

Social impacts:

1.
2.

5. Distinguish between direct and indirect threats to rainforests.

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6a. Explain why climate change is an indirect threat to rainforests.

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6b. Outline how climate change could affect tropical rainforests.

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7. Define the terms 'drought' and 'ecosystem stress'.

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8. Rank the following causes of deforestation in order – 1 being the largest

Cause	
Small-scale agriculture	
Large-scale agriculture	
Cattle ranching	
Logging	

9. Explain why rainforest soils quickly deteriorate after deforestation has

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10. Suggest a possible cause for the smoke in the photograph below.



11. Explain why 'slash-and-burn' is sustainable.

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Extension Questions

12. Assess which of the following is more damaging to the environment:
 farming.

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13. 'Causes of deforestation such as dam building or commercial agriculture and negative impacts.' Assess what could be meant by this statement.

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14. Suggest how damaging road building is within rain forest environment

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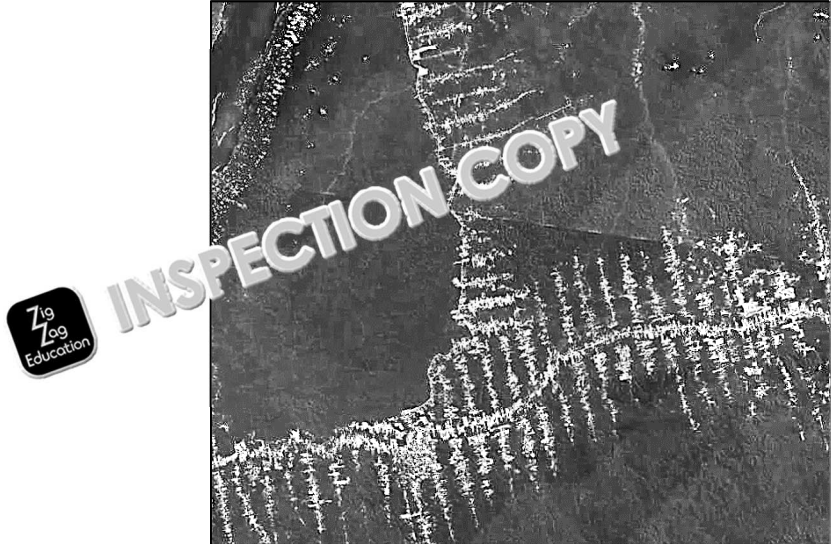


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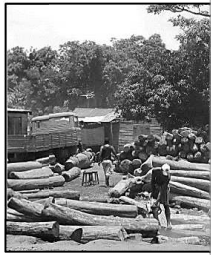

Test 2 – Threats to the Rainforest

1. Give a definition for the term 'deforestation'.
2. Distinguish between commercial and subsistence farming.
3. The aerial photograph shows the process of deforestation in the Amazon



Suggest **two** possible causes of this deforestation, and identify **two** problems that deforestation may cause.

- 4a. The table below shows four causes of rainforest destruction. Identify each cause and provide **two** ways that damage **to the environment** is caused by the activity.

1.		3.	
2.		4.	
	or		
			

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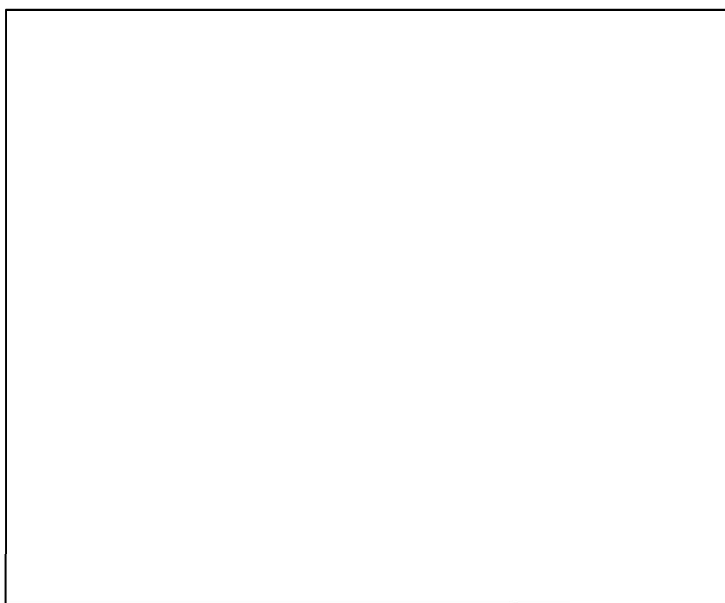


- 4b. Describe **two** economic impacts and **two** social impacts caused by the rainforests.
5. Distinguish between direct and indirect threats to rainforests.
- 6a. Explain why climate change is an indirect threat to rainforests.
- 6b. Outline how climate change could affect tropical rainforests.
7. Define the terms 'drought' and 'ecosystem stress'.
8. Rank the following causes of deforestation in order – 1 being the largest



Cause
Small-scale agriculture
Large-scale agriculture
Cattle ranching
Logging

9. Explain why rainforest soils quickly deteriorate after deforestation has
10. Suggest a possible cause for the smoke in the photograph below.



11. Explain why 'slash-and-burn' is sustainable

Extension Questions

12. Assess which of the following is more damaging to the environment: slash-and-burn agriculture or commercial farming.
13. 'Causes of deforestation such as dam building or commercial agriculture have both positive and negative impacts.' Assess what could be meant by this statement.
14. Suggest how damaging road building is within rainforest environment

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Preview of Questions Ends Here

This is a limited inspection copy. Sample of questions ends here to avoid students previewing questions before they are set. See contents page for details of the rest of the resource.

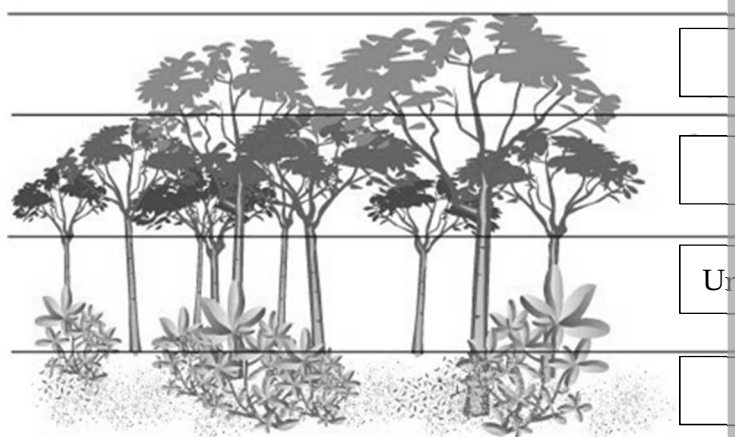
Answers

Test 1 – The Structure and Adaptations of Tropical Rainforests

- 1a. High all-year temperature above 25 °C, except for December (1 mark). Slightly higher in September (28 °C). Rainfall is seasonal (1 mark), dry season in the summer (1 mark) with around 50 mm, winter and springs are wet (1 mark) with around 250 mm of rainfall per month is March, with over 300 mm per year (1 mark).
- 1b. There are very few limiting factors to growth (1 mark) such as warmth (1 mark), and high rainfall (1 mark). This results in a year-round growing season (1 mark) to the equator (1 mark).
- 1c. Rainforests must occur closer to the equator (1 mark) where there is sufficient rainfall. Further away wouldn't be enough rainfall to support trees (1 mark), leading to a transition to savanna.
2. There are several layers of vegetation (1 mark – mandatory). For example, there is an emergent layer (1 mark), there is often a shrub layer (1 mark), an understory (1 mark) and a canopy layer of the tallest trees (1 mark).

Also allow responses such as:

The rainforest is divided into several distinct layers, as shown on the annotated diagram.



3a.

Problem	Solution	
Under humid conditions, there is the risk of moulds growing on leaves.	Waxy leaves, with drip tips	Leaves shed water
Trees have to grow very tall to reach the light – they can't fall over.	Buttress roots	All trees are tall
It is very dark on the forest floor.	Layered structure (stratified) Lianas Epiphytes	Low vegetation in the understorey allows light to reach the forest floor (epiphytes grow on the high canopy)
Trees need to discourage climbing plants.	Slippery bark	Tree climb the trunk

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- 3b.
- To avoid competition, animals occupy more niches (1 mark).
 - To avoid being preyed upon, many animals camouflage themselves (1 mark).
 - To avoid being preyed upon, many animals camouflage themselves (1 mark), or may only be active at night (1 mark), or may only be active in the canopy (1 mark), or may only be active in the forest floor (1 mark), or may only be active in the forest floor (1 mark), or may only be active in the forest floor (1 mark).
 - It is very dark on the forest floor, meaning that animals may have large eyes (1 mark).
- 4a. Allow two marks for each of two named, described features (four marks in total).
- The biomass store is very large (1 mark) because of the high net primary productivity (1 mark).
 - The litter layer is very small (1 mark), because decay is rapid in the wet and conditions also allow for rapid rates of chemical weathering (1 mark).
 - High rainfall in the rainforest (1 mark) allows for rapid leaching of nutrients (1 mark).
 - Unlike in temperate forest, there are no major deciduous trees throughout the year (1 mark).
 - Soil nutrient stores are reduced (1 mark) by the large uptake pathway (1 mark).
 - Allow any other valid point(s).
- 4b. Biomass
- 4c. Conditions throughout the year are warm (1 mark) and moist (1 mark), which are suitable for decomposers (1 mark).
5. Award marks for:
- Suitable species
 - Correct order – i.e. suitable location for each trophic level
 - Arrows in the correct place/direction

6. Complex (1 mark – mandatory).
- Reasons:
- High biodiversity (1 mark) – many niches (1 mark).
 - Few limiting factors (1 mark).
 - Many decomposers – e.g. insects which are consumed by others (1 mark).
 - High energy ecosystem – very high plant biodiversity (1 mark).

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Extension Questions

7. Discussion of:
- High plant growth rates due to lengthy growing season and moisture available.
 - Niches and biodiversity.
 - Development of layered structure.
 - Weathering/leaching and nutrient availability.
 - Any other valid point(s).
8. The photograph is taken at the emergent layer:
Emergent trees (e.g. top left) (1 mark)
Canopy (1 mark)
9. Very important (1 mark).
Allow any other three points, such as:
- Warm throughout the year – e.g. equatorial regions.
 - High rainfall.
 - Intense sunshine (in the tropics – there are likely to be thunderstorms in the afternoon).
 - Little seasonal variation.
 - Any other valid point(s).

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Preview of Answers Ends Here

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