2.5 Tropical Rainforests: Causes and Impacts of Deforestation: 30-minute Pack

AQA 8035 · Calculators not allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Describe how commercial cattle ranching leads to loss of rainforest in the Amazon, including the typical land use change.

(Total for Question 1 is 2 marks)

2 Describe how soya agribusiness contributes to deforestation in the Amazon, mentioning commercial farming change.

(Total for Question 2 is 2 marks)

3 Describe how new roads such as the Trans-Amazonian Highway cause further deforestation beyond their own footprint.

(Total for Question 3 is 2 marks)

4 Describe how population growth and settlement expansion contribute to Amazon deforestation, giving one local example of land converted.

(Total for Question 4 is 2 marks)

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5 Explain one impact of deforestation on indigenous groups in the Amazon, giving a named type of impact.

(Total for Question 5 is 2 marks)

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6 Explain the impacts of deforestation in the Amazon rainforest in Brazil.

(Total for Question 6 is 6 marks)

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7 Explain how burning cleared vegetation, a method often used in deforestation, contributes directly to climate change.

(Total for Question 7 is 3 marks)

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8 Explain how deforestation in the Amazon can reduce rainfall within the local region itself.

(Total for Question 8 is 2 marks)

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9 Describe how hydroelectric schemes and dams can lead to deforestation in the Amazon, giving one named effect on land use.

(Total for Question 9 is 2 marks)

10 Explain TWO impacts of deforestation on biodiversity in the Amazon rainforest, using specific effects.

(Total for Question 10 is 3 marks)

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Mark scheme · 2.5 Tropical Rainforests: Causes and Impacts of Deforestation: 30-minute Pack

Question 1

large areas of forest are cleared to create pasture for cattle, oe **B1**

this is often done commercially to supply meat for domestic and international markets, increasing deforestation, oe **B1**

Answer: Large areas of forest are cleared to create pasture for cattle; this commercial ranching supplies meat for domestic and export markets and so increases deforestation.

Question 2

forest is cleared to create large-scale soya fields for export and animal feed, oe **B1**

mechanised agribusiness replaces forest and small farms, increasing the area deforested, oe **B1**

Answer: Forest is cleared for large-scale soya fields used for export and animal feed; mechanised agribusiness replaces forest and small farms, increasing deforested area.

Question 3

roads open access to remote forest, allowing loggers, farmers and settlers to reach and clear land, oe **B1**

they lead to settlement and further smallholder or commercial clearing along the road corridor, increasing deforestation, oe **B1**

Answer: Roads open access to remote forest for loggers, farmers and settlers, and lead to settlement and further clearing along the corridor, increasing deforestation beyond the road itself.

Question 4

growing rural and urban populations need land for housing and agriculture, so forest is cleared for settlements, oe **B1**

example linked detail, e.g. riverbank villages or new farmsteads replace forest, oe **B1**

Answer: Growing rural and urban populations need land for housing and agriculture, so forest is cleared for settlements; for example riverbank villages or new farmsteads often replace forest.

Question 5

loss of land and resources reduces ability to practise traditional livelihoods, oe **B1**

this can cause social disruption, displacement and loss of cultural practices, oe **B1**

Answer: Loss of land and resources reduces the ability of indigenous people to practise traditional livelihoods, causing social disruption, displacement and loss of cultural practices.

Question 6

Level 3 A detailed explanation that uses specific reference to the Amazon in Brazil, covering economic, environmental and social impacts with developed examples and clear links between deforestation processes and consequences, leading to an overall judgement or synthesis. **5-6**

Level 2 A clear explanation that covers at least two types of impact (economic, environmental or social) with some specific reference to the Amazon, but with less development or fewer linked examples. **3-4**

Level 1 Simple statements about the impacts of deforestation with limited or no reference to the named Amazon case and little development. **1-2**

Indicative content:

- Economic impacts: short-term gains from timber sales, cattle ranching and soya exports that create income and jobs, but risk of long-term decline in productivity due to soil degradation and loss of ecosystem services such as pollination and water regulation.
- Environmental impacts: loss of biodiversity and habitat leading to local extinctions and fragmentation; increased soil erosion and nutrient leaching reducing fertility; the Amazon as a carbon store is weakened so deforestation releases carbon and reduces carbon sequestration, contributing to climate change.
- Social impacts: indigenous and local communities lose land and resources, face displacement and cultural loss, and may suffer conflicts over land; health and livelihoods can be affected by pollution from mining and by changes in local climate and water availability.
- Links and judgement: explain how processes such as clear-felling, road building and dam reservoirs drive these impacts, and weigh short-term economic benefits against long-term environmental damage and social costs when reaching a conclusion about overall impact.

Question 7

burning releases the carbon stored in trees and vegetation as carbon dioxide into the atmosphere, oe **B1**

this adds to the store of greenhouse gases already in the atmosphere, oe **B1**

an enhanced greenhouse effect traps more heat, contributing to global warming and climate change, oe **B1**

Answer: Burning releases the carbon stored in trees and vegetation as carbon dioxide, adding to the store of greenhouse gases in the atmosphere. This enhances the greenhouse effect, trapping more heat and contributing to global warming and climate change.

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Question 8

trees return large amounts of water vapour to the atmosphere through evapotranspiration, oe **B1**

fewer trees mean less water vapour is released, reducing cloud formation and lowering local rainfall, oe **B1**

Answer: Trees return large amounts of water vapour to the atmosphere through evapotranspiration; fewer trees mean less water vapour is released, reducing cloud formation and lowering local rainfall.

Question 9

building dams floods large areas of forest to create reservoirs, removing trees and habitat, oe **B1**

construction also requires roads and worker settlements, causing additional clearance, oe **B1**

Answer: Building dams floods large areas of forest to create reservoirs, removing trees and habitat, and construction requires roads and settlements that cause additional clearance.

Question 10

impact 1, e.g. habitat loss reduces numbers of species and can cause local extinctions, oe **B1**

linked detail for impact 1, e.g. specialist species that rely on intact forest are particularly vulnerable, oe **B1**

impact 2, e.g. fragmentation isolates populations, reducing genetic diversity and making species more vulnerable to disease or environmental change, oe **B1**

Answer: Habitat loss from clearing reduces numbers of species and can cause local extinctions, especially of specialist species that rely on intact forest; fragmentation isolates populations, reducing genetic diversity and making species more vulnerable to disease or environmental change.

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