2.5 The Earth and its Atmosphere: 10-minute Pack

Calculator allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Name the two main gases that make up most of Earth's atmosphere.

(1)

2 Write down the simple word equation for the combustion of methane (natural gas).

(2)

3 Evaluate whether governments should prioritise reducing carbon dioxide emissions or protecting forests when trying to limit climate change. In your answer, give evidence for both sides and reach a supported conclusion.

(6)

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Mark scheme · 2.5 The Earth and its Atmosphere: 10-minute Pack

Question 1

Nitrogen and oxygen, or N_2 and O_2, cao	**B1**

Answer: **Nitrogen and oxygen**

Question 2

methane + oxygen -> carbon dioxide + water or equivalent word order	**M1**
statement that combustion produces CO_2 and water (accept: methane + oxygen -> carbon dioxide + water)	**A1**

Answer: **methane + oxygen -> carbon dioxide + water**

Question 3

Level 3 A balanced evaluation with clear evidence for both reducing CO_2 emissions and protecting forests, showing understanding of strengths and limits of each approach and a justified conclusion.	**5-6**
Level 2 Some evaluation with evidence for both sides but limited linkage or a weak conclusion.	**3-4**
Level 1 Simple statements or assertions about one or both options with little evidence and no clear conclusion.	**1-2**

Indicative content:

- Points for reducing CO_2 emissions: direct reduction of greenhouse gas sources, policies on energy efficiency, transport electrification; evidence could include reduced emissions leading to lower atmospheric CO_2 growth.
- Points for protecting forests: forests absorb CO_2 (carbon sink), protect biodiversity, prevent soil erosion; evidence includes amount of carbon stored in trees and soil and faster impact locally.
- Limits: reducing emissions can be costly and slow to implement; protecting forests can be undermined by deforestation and fires and does not stop ongoing emissions from fossil fuels.
- Consider combined approach: both are important together; short-term measures to cut emissions plus long-term forest protection and restoring ecosystems.
- Supported conclusion should weigh evidence and justify a recommended priority or argue for integrated policies.

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