

## Yr 7 December Mock Mark Scheme

### Section A Extreme Environments

Q1. Accurate labelling of Tropics and Arctic Circle. 1 mark each. (Total 3)

Q2. Lagos labelled in Africa (right), Sao Paulo in S. America (left). 1 mark each.  
(Total 2)

Q3. B, C (Antarctica not visible on map) 1 mark each. (Total 2)

Q4. **Biomes** are very large ecological areas on the earth's surface, with fauna and flora (animals and plants) adapting to their environment. 1 mark.

Q5. Similarity e.g. both polar / cold deserts / both extremely cold /total darkness in winter. Differences – Polar bears Arctic / Penguins Antarctic. 1 mark.

Q6. Challenges of polar environments – extreme temperatures down to -50\* risk of hypothermia / impossible to grow anything (food) to survive. Buildings raised above ground to avoid permafrost melting. Darkness all day and night in winter. 1 sensible developed point for 2 marks.

Q7. Animal adaptations – camouflage to avoid predators / blubber or fur for warmth / stream lined feathers for swimming / strong beaks to catch prey. 1 sensible developed point for 2 marks.

Q8. Sami adaptations – 2 developed points for 4 marks:

- Make holes in the ice to catch fish.
- Use reindeer fur for warm clothing.
- Grow food like potatoes in the short summer season.
- Food stored in barns raised above ground to avoid snow.
- Nomadic, move around to allow reindeer to graze on lichen.
- Fish caught in summer is stored for winter (preserve food).

Q9. Oil extraction Social Impacts:

- Sites may be homes to indigenous tribes. Destroy communities and traditional lifestyle.

Environmental Impacts:

- Risk of oil spill – Exxon Valdez – impact of wildlife habitats.
- Burning oil (fossil fuels) releases greenhouse gases.

2 developed points (1 envt / 1 social) other examples may be valid.

Q10. Protect / Exploit Cold Envts (6 marks)

Balanced argument

Exploit arguments:

- 1.2 billion barrels worth of oil discovered in Alaska = energy security.

- Job opportunities 1/3 of all jobs in Alaska in oil industry. 38% of wages in Alaska from oil industry.
- Oil industry a major source of export revenue and tax – investment in infrastructure, health and education.

Protect arguments:

- Risk of oil spills catastrophic in such a fragile environment (Exxon Valdez).
- Threat to wildlife habitats.
- Threat to indigenous tribes and traditional lifestyle.
- Risk of permafrost melt and release of methane.
- Threat to caribou migration.
- Burning fossil fuels releases greenhouse gases.

Relevant developed points, PEEL chains see L7 8 for evidence.

Level 1 Basic 1-2

Level 2 Clear 3-4

Level 3 Detailed 5-6

## **Section B Beautiful Brazil**

Q1. Distribution TRFs – low latitudes around equator. Approximately 20° north and south. Brazil – Amazon, Congo Basin Africa, Malaysia & Indonesia – Asia. (2)

Q2. 2 characteristics TRFs tall trees – competition for sunlight. Buttress roots anchor to ground. Large waxy leaves with drip tips to shed water and prevent rotting. Any 2 relevant points. Hot, wet and humid all year. (2).

Q3. ½ mark each from top to bottom:

Emergent, canopy, under canopy, shrub layer or forest floor. (2)

Q4. Large waxy leaves with drip tips to shed water, prevent rotting. Large leaves maximum photosynthesis. Plants / trees tall competition for sunlight. 2 x developed points. (4)

Q5. Long appendages (arms, leg, tail) to grip onto trees when jumping through canopy.

Q6. Dangerous animals, poisonous creatures and plants, dense vegetation, high humidity. (1)

Q7. 60 (1).

Q8. Clear visual representation. Image appropriate to data being represented. Easy to interpret – key. (1)

Q9. Issues to discuss:

Over fishing, litter, loss of animals, mass tourism, melting ice. 3 developed points re opportunities and challenges of fulfilling Antarctic Treaty:

Antarctic Treaty set up to protect Antarctica:

**Peaceful purposes**

Antarctica shall be used for peaceful purposes only. Activities linked to the military are banned in Antarctica. The building of military bases and the carrying out of military manoeuvres, as well as the testing of any type of weapon are banned in Antarctica.

**Scientific investigations**

There is a freedom of scientific investigation in Antarctica and cooperation between countries who have signed the treaty. Countries with scientists working on Antarctica will be shared between scientists. This means experiments will be run more effectively and better results should be obtained. Scientists from different countries can work with other scientists. This means experiments have the best scientists with the best knowledge to complete the experiments.

**Territorial sovereignty**

The original countries who were working on Antarctica claimed parts of Antarctica. But the Antarctic treaty (agreement) means that no conflicts will occur. This is because the treaty says nobody own Antarctica. This means that countries will work together and nobody can invade or break the rules of the agreement for their own benefit.

**Nuclear activity**

Antarctica would be a great place to test nuclear weapons and dispose of harmful material and waste because nobody lives there so will nobody be affected. But Antarctica is the world's last wilderness so it needs to be protected.

It is illegal for any country to test nuclear weapons in Antarctica or dispose of nuclear waste. This ban is important because it means the environment and animals living in Antarctica are protected.

Opportunities v Challenges:

Task: Complete the table identifying the opportunities and challenges of the Antarctic Treaty

You have this much time...

Opportunities (positives)	Challenges (negatives)
<p>7. Countries co-operate with each other</p> <p>6. The area remains a demilitarised area</p> <p>2. No country own Antarctica which means it remains a peaceful island</p> <p>4. Scientists are monitoring the continent to see how it is affected by climate change.</p>	<p>5. Not everyone is following the Treaty as illegal fishermen are fishing there</p> <p>3. The treaty is failing to protect Antarctica since new species of animals are reaching the island</p> <p>Aspiring outcome</p> <ul style="list-style-type: none"> <li>✓ To identify and know the characteristics of the Antarctica Treaty.</li> <li>✓ To evaluate the pros and cons of these treaties on people and the environment.</li> </ul> <p>Challenging outcome</p> <ul style="list-style-type: none"> <li>✓ To justify the main threat to Antarctica.</li> </ul>
<p>1. Resources might not be getting used as mining is banned in Antarctica</p>	

UK map | World map - Political | World map - Physical | Whiteboard | Steps | Self / peer assessment | Response time

Level 1 Basic

Level 2 Clear

Level 3 Detailed