2.1 Hot Desert Characteristics, Adaptations and Opportunities for Development: 10-minute Pack

AQA 8035 · Calculators not allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Define a 'hot desert' environment, naming the typical climate and vegetation context for deserts such as the Sahara or the Thar Desert.

(Total for Question 1 is 1 mark)

2 State a typical annual rainfall range (in millimetres) for hot deserts such as the Sahara or the Thar Desert.

(Total for Question 2 is 1 mark)

3 Describe the typical daily temperature range in a hot desert environment such as the Sahara or Thar Desert and explain why daily extremes occur.

(Total for Question 3 is 2 marks)

4 Give TWO physical features of hot desert soils, for example in areas of the Thar Desert or the Sahara.

(Total for Question 4 is 2 marks)

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5 Give ONE behavioural adaptation of a desert animal, for example in the Sahara or Thar Desert, and explain how this adaptation reduces exposure to extreme heat.

(Total for Question 5 is 2 marks)

6 A small research station in a dry part of the Thar Desert recorded annual rainfall in two adjacent years: Year 1 = 220 mm, Year 2 = 55 mm. Calculate the percentage decrease in annual rainfall from Year 1 to Year 2, to one decimal place.

(Total for Question 6 is 2 marks)

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Mark scheme · 2.1 Hot Desert Characteristics, Adaptations and Opportunities for Development: 10-minute Pack

Question 1

a region with very low and unreliable rainfall and sparse, specialised vegetation (xerophytes), often very hot by day, oe **B1**

Answer: A region with very low and unreliable rainfall and sparse specialised vegetation, often with very hot daytime temperatures.

Question 2

about 0 to 250 mm per year, oe **B1**

Answer: About 0 to 250 mm per year.

Question 3

daytime temperatures can be very high (often above 40°C) and nights very low (often near or below 0°C), oe **B1**

linked explanation, e.g. the low humidity and lack of cloud allow strong daytime heating and rapid cooling at night, oe **B1**

Answer: Daytime temperatures are often very high, above 40°C, while nights can be near or below 0°C. The low humidity and lack of cloud mean strong daytime heating and rapid night cooling.

Question 4

sandy or rocky soil texture, oe **B1**

low organic matter and low fertility, oe **B1**

Answer: Sandy or rocky texture; low organic matter and low fertility.

Question 5

behavioural adaptation named, e.g. being nocturnal, oe **B1**

linked explanation, e.g. active at night to avoid daytime heat, reducing water loss and overheating, oe **B1**

Answer: Nocturnal behaviour, active at night to avoid high daytime temperatures, which reduces overheating and water loss.

Question 6

(220 - 55) / 220 x 100 or 165 / 220 x 100 seen, oe **M1**

75.0% cao **A1**

Answer: 75.0%.

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