1.9 Tropical Storms: Formation, Structure and Distribution: 10-minute Pack

AQA 8035 · Calculators not allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 State the minimum sea surface temperature (in °C) typically needed for tropical storm formation.

(Total for Question 1 is 1 mark)

2 Give one reason why the Coriolis effect is necessary for tropical storm formation, in the context of rotating storms over the ocean.

(Total for Question 2 is 1 mark)

3 Name TWO atmospheric conditions, other than warm sea surface temperature, that favour tropical storm formation.

(Total for Question 3 is 2 marks)

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4 Give one structural feature of a mature tropical storm and briefly state its function, using the storm structure context.

(Total for Question 4 is 2 marks)

5 A tropical basin recorded 80 tropical storms in a 10 year period. If the North Pacific recorded 160 in the same period, what fraction of these two basins combined did the North Pacific represent? Give your answer as a fraction in simplest form.

(Total for Question 5 is 3 marks)

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Mark scheme · 1.9 Tropical Storms: Formation, Structure and Distribution: 10-minute Pack

Question 1

27°C **B1**

Answer: 27°C

Question 2

it causes the developing air to rotate, allowing a organised cyclonic circulation to form, oe **B1**

Answer: The Coriolis effect causes the air to rotate, allowing a organised cyclonic circulation to develop.

Question 3

low vertical wind shear, oe **B1**

low surface pressure / an area of low pressure, oe **B1**

Answer: Low vertical wind shear and low surface pressure.

Question 4

feature named, e.g. the eye, oe **B1**

function, e.g. calm, low wind and low cloud area at the centre of the storm, oe **B1**

Answer: The eye, the calm central area with relatively low winds and reduced cloud.

Question 5

160 / (160 + 80) or 160 / 240 seen, oe **M1**

2/3 cao **A1**

fraction simplified to 2/3 stated, oe **B1**

Answer: 2/3

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