3.3 Glacial Landscapes: Transportation and Depositional Landforms: 10-minute Pack

AQA 8035 · Calculators not allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Define the term 'supraglacial transport' in the context of glaciers and debris movement on and around ice in upland valleys.

(Total for Question 1 is 1 mark)

2 Name where a medial moraine forms and explain briefly why it appears in that position on a valley glacier.

(Total for Question 2 is 1 mark)

3 State one example of subglacial transport, naming the mechanism that moves debris at the glacier base.

(Total for Question 3 is 1 mark)

4 Name ONE type of moraine (lateral, medial or terminal) and give a brief description of where it forms relative to glacier ice in a valley setting.

(Total for Question 4 is 2 marks)

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5 Give TWO ways meltwater from a glacier helps to sort and deposit fluvioglacial material in front of the ice.

(Total for Question 5 is 2 marks)

6 A small glacier deposited 1,200 tonnes of unsorted till and 300 tonnes of sorted sand and gravel in its foreland during a single summer of melting. Calculate the percentage of the total deposited material that is fluvioglacial sand and gravel. Give your answer to one decimal place.

(Total for Question 6 is 2 marks)

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Mark scheme · 3.3 Glacial Landscapes: Transportation and Depositional Landforms: 10-minute Pack

Question 1

material transported on the surface of a glacier, such as rocks and sediment, oe **B1**

Answer: Material transported on the surface of a glacier, such as rocks and sediment.

Question 2

medial moraine forms down the centre of a glacier where two glaciers join, and is formed when the lateral moraines of the joined glaciers combine, oe **B1**

Answer: A medial moraine forms down the centre of a glacier where two valley glaciers have joined; it appears there because the lateral moraines from each glacier combine as the ice merges.

Question 3

e.g. basal sliding carrying debris along the glacier bed, oe **B1**

Answer: Basal sliding carrying debris along the glacier bed.

Question 4

one correctly named moraine type, e.g. lateral moraine, medial moraine or terminal moraine, oe **B1**

correct description of where it forms relative to the glacier, oe **B1**

Answer: Example: lateral moraine, which forms as a ridge of debris along the side of a glacier where material falls from the valley wall onto the ice.

Question 5

flowing meltwater carries finer material further than coarse material, causing size sorting, oe **B1**

water velocity changes lead to layering or bedding, with heavier particles dropping out first and finer particles deposited further away, oe **B1**

Answer: Flowing meltwater carries finer material further than coarse material, causing size sorting; changes in water velocity cause layering or bedding, with heavier particles deposited first and finer particles carried further.

Question 6

300 / (1200 + 300) seen or 300 / 1500 seen, oe **M1**

20.0% cao **A1**

Answer: 20.0%.

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