# Oxford Revise | Geography | Answers

## Chapter 20

**All exemplar answers given are worth full marks.**

**1.1** Freeze–thaw weathering

**Accept other suitable answers.**

**1.2** This question is level-marked:

| Level | Marks | Description |
|---|---|---|
| 2 (clear) | 3–4 | • Sound, organised and relevant throughout, using supporting evidence and examples<br>• Communicates good knowledge and understanding<br>• Communicates using developed statements and ideas (e.g. uses connectives)<br>• Uses geographical terms and vocabulary |
| 1 (basic) | 1–2 | • Basic throughout with limited supporting evidence and/or examples<br>• Communicates limited knowledge and understanding<br>• Explanations are partial<br>• Little or no use of geographical terms and vocabulary |
| | 0 | No relevant content |

Example answer: *Figure 1 shows a scree slope that would have been formed by freeze-thaw weathering. Exposed rocky mountain faces have cracks and weaknesses in them. Rainwater gathers in these cracks and when the temperature drops, this water freezes. As it freezes, it expands, which forces the crack apart. Over time, repeated freezing and thawing leads to fragments of rock breaking off and gathering in a slope called a scree slope.*

**1.3** As a glacier moves, it might freeze around a piece of rock that is loose. As the glacier continues to move, it is frozen to this rock and pulls it off the rock face in a plucking action.

**1.4** Pieces of rock might be frozen into the base of the glacier. Abrasion is the name given to the erosion that takes place when the glacier moves and these rocks scrape along the valley floor, wearing it away.

**1.5** This question is level-marked:

| Level | Marks | Description |
|---|---|---|
| 2 (clear) | 3–4 | • Sound, organised and relevant throughout, using supporting evidence and examples<br>• Communicates good knowledge and understanding<br>• Communicates using developed statements and ideas (e.g. uses connectives)<br>• Uses geographical terms and vocabulary |
| 1 (basic) | 1–2 | • Basic throughout with limited supporting evidence and/or examples<br>• Communicates limited knowledge and understanding<br>• Explanations are partial<br>• Little or no use of geographical terms and vocabulary |

| Level | Marks | Description |
|---|---|---|
| | 0 | No relevant content |

Example answer: *Glaciers move through the action of gravity pulling the weight of the glacier downhill. They move through ice deformation, which is when ice breaks and reshapes, resulting in a downhill movement. They also move because the pressure of the ice melts ice underneath the glacier, lubricating the base and helping it slide downhill. When the landscape is curved, this sliding motion is called rotational slip.*

**1.6** Bulldozing is when glaciers push material along in front of the glacier as they move.

**1.7** Glaciers transport material when rocks are frozen within the glacier and transported as it moves.

**2.1** A and D

**2.2** This question is level-marked:

| Level | Marks | Description |
|---|---|---|
| 2 (clear) | 3–4 | • Sound, organised and relevant throughout, using supporting evidence and examples<br>• Communicates good knowledge and understanding<br>• Communicates using developed statements and ideas (e.g. uses connectives)<br>• Uses geographical terms and vocabulary |
| 1 (basic) | 1–2 | • Basic throughout with limited supporting evidence and/or examples<br>• Communicates limited knowledge and understanding<br>• Explanations are partial<br>• Little or no use of geographical terms and vocabulary |
| | 0 | No relevant content |

Example answer: *A corrie is a large armchair-shaped hollow. They are formed when snow gathers in small hollows and is compressed into ice. As more snow builds up and more ice is formed, there is greater pressure at the base of the ice. Gravity will start to pull the compressed ice down the valley, and it will begin to move via rotational slip. As it moves, it will scrape at the base of the hollow, deepening it through abrasion and removing more material through plucking. Plucking will also take place at the back of the hollow, creating a steeper back and an armchair shape.*

**2.3** This question is level-marked:

| Level | Marks | Description |
|---|---|---|
| 3 (detailed) | 5–6 | • Thorough, detailed, organised, and relevant throughout with supporting evidence and examples<br>• Communicates detailed, clear knowledge and understanding<br>• Communicates using developed statements and ideas (e.g. uses connectives to fully explore ideas)<br>• Good use of geographical terms and vocabulary |

| Level | Marks | Description |
|---|---|---|
| 2 (clear) | 3–4 | • Sound throughout with some supporting evidence and examples<br>• Communicates some knowledge and understanding<br>• Communicates using linked statements and ideas (e.g. uses connectives, but needs further development)<br>• Some use of geographical terms and vocabulary |
| 1 (basic) | 1–2 | • Basic throughout with limited supporting evidence and/or examples<br>• Communicates limited knowledge and understanding<br>• Communicates using simple statements that are not developed<br>• Little or no use of geographical terms and vocabulary |
| | 0 | No relevant content |

Example answer: *Figure 2 shows a glacial trough or U-shaped valley and truncated spurs. The glacial trough is formed when the glacier moves downhill in a V-shaped river valley and (through erosion) deepens and widens it into a U-shaped valley.*

*The glacier moves from high up in the mountain through basal slip. This is when the pressure melts the ice underneath the glacier, lubricating the bottom and allowing it to be moved by gravity. As it moves, abrasion takes place when rock fragments frozen into the glacier scrape away at the valley sides and base. Plucking also takes place as the glacier freezes around rock fragments and pulls them loose as it moves. These processes carve the U shape of the glacial trough.*

*The river valley would also have interlocking spurs, which are alternating bands of more resistant rock. As the glacier moves, the erosive power is so great that it cuts these spurs away, leaving the truncated spurs seen in Figure 2.*

**2.4** This question is level-marked:

| Level | Marks | Description |
|---|---|---|
| 2 (clear) | 3–4 | • Sound, organised and relevant throughout, using supporting evidence and examples<br>• Communicates good knowledge and understanding<br>• Communicates using developed statements and ideas (e.g. uses connectives)<br>• Uses geographical terms and vocabulary |
| 1 (basic) | 1–2 | • Basic throughout with limited supporting evidence and/or examples<br>• Communicates limited knowledge and understanding<br>• Explanations are partial<br>• Little or no use of geographical terms and vocabulary |
| | 0 | No relevant content |

Example answer: *Ribbon lakes form when glaciers move downhill and carve a glacial trough. As they are eroding the glacial trough through abrasion and plucking, they sometimes meet a band of rock that is less resistant than the rock they are moving over. The less resistant rock will erode more easily and therefore deepen as the glacier moves over it, leaving a large hollow in the base of the valley. When the glacier melts, the hollow is filled with meltwater and rainwater, creating a long ribbon lake.*

**2.5** A: lateral moraine

B: medial moraine

**2.6** This question is level-marked:

| Level | Marks | Description |
|---|---|---|
| 2 (clear) | 3–4 | • Sound, organised and relevant throughout, using supporting evidence and examples<br>• Communicates good knowledge and understanding<br>• Communicates using developed statements and ideas (e.g. uses connectives)<br>• Uses geographical terms and vocabulary |
| 1 (basic) | 1–2 | • Basic throughout with limited supporting evidence and/or examples<br>• Communicates limited knowledge and understanding<br>• Explanations are partial<br>• Little or no use of geographical terms and vocabulary |
| | 0 | No relevant content |

Example answer: *Cadair Idris in Snowdonia in North Wales has a corrie called Llyn Cau. This was formed when snow accumulated in a hollow or depression and compacted into thick ice. Under the influence of gravity, the ice started to move downhill via rotational slip. As it moved, it deepened the hollow through abrasion and plucking. The back of the hollow became steeper as plucking removed rock fragments and freeze-thaw weathering also led to fragments of rock breaking off. Over time, this created the steep back armchair-shaped hollow of Llyn Cau.*

**Answers will vary depending on the glaciated upland area studied.**

**3.1** The grid square contains a glacial trough. The southern and north-west sections of this grid square are very steep slopes rising to approximately 300 m above sea level. In between these steep slopes in the centre of the grid square is a flat valley floor.

**3.2** C

**3.3** A tarn or corrie **(accept either answer)**

**3.4** Facing south-west.

**3.5** D

**3.6** 514 m