

# Oxford Revise | Geography | Answers

## Chapter 18

All exemplar answers given are worth full marks.

1.1 The gradient gets flatter towards the mouth.

1.2 The bedload will get smaller in size and rounder and smoother in shape towards the lower course.

1.3 Abrasion is one fluvial process which erodes the landscape. Abrasion takes place when the river throws stones and sediment against the river's banks, gradually wearing them away.

**Accept other suitable answers.**

1.4 Hydraulic action is the force of the water hitting the river banks. Faster flowing water has more hydraulic power.

1.5 Solution is when lightly acidic river water dissolves alkaline rocks like limestone.

1.6 Abrasion is when the river throws stones and sediment against the river's banks, gradually wearing them away.

1.7 Sea walls are usually made of concrete, so can look unnatural. They can also be expensive to build.

1.8 A

1.9 When the flow of water slows down and loses energy to transport its load, such as when it meets an obstacle.

1.10 **Accept either** V-shaped valley or interlocking spurs.

2.1 B

2.2 The land in this square is flat in the south-eastern corner and there is a slope rising from 10 m above sea level to 30 m above sea level running diagonally from the south to the north-east of this square. At the top of this slope, the land is flat. The highest point in the square is 33 m above sea level.

2.3 A meander

2.4 A spot height of 35 m above sea level.

2.5 22 m

3.1 Interlocking spurs are formed when a river winds around alternating bands of resistant rock that it does not have the energy to cut through.

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

| Level        | Marks | Description   |
|--------------|-------|---|
| 3 (detailed) | 5–6   | <ul style="list-style-type: none"> <li>• Thorough, detailed, organised, and relevant throughout with supporting evidence and examples</li> <li>• Communicates detailed, clear knowledge and understanding</li> <li>• Communicates using developed statements and ideas (e.g. uses connectives to fully explore ideas)</li> <li>• Good use of geographical terms and vocabulary</li> </ul> |
| 2 (clear)    | 3–4   | <ul style="list-style-type: none"> <li>• Sound throughout with some supporting evidence and examples</li> <li>• Communicates some knowledge and understanding</li> <li>• Communicates using linked statements and ideas (e.g. uses connectives, but needs further development)</li> <li>• Some use of geographical terms and vocabulary</li> </ul>  |
| 1 (basic)    | 1–2   | <ul style="list-style-type: none"> <li>• Basic throughout with limited supporting evidence and/or examples</li> <li>• Communicates limited knowledge and understanding</li> <li>• Communicates using simple statements that are not developed</li> <li>• Little or no use of geographical terms and vocabulary</li> </ul>   |
|              | 0     | No relevant content   |

Example answer: *Waterfalls form when a river meets a band of less resistant rock. This rock erodes more quickly and a dip or step is created in the river channel. Through processes of hydraulic action and abrasion, this step is deepened and forms a plunge pool. As water swirls around in the plunge pool, it begins to undercut the more resistant rock that lies on top of the less resistant rock. Over time, an overhang of resistant rock develops with the less resistant rock beneath it continuing to be undercut. The plunge pool is also being deepened by hydraulic action and abrasion. Eventually, the overhanging resistant rock will collapse under gravity and the waterfall will move up the river.*

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

| Level     | Marks | Description  |
|-----------|-------|--|
| 2 (clear) | 3–4   | <ul style="list-style-type: none"> <li>• Sound, organised and relevant throughout, using supporting evidence and examples</li> <li>• Communicates good knowledge and understanding</li> <li>• Communicates using developed statements and ideas (e.g. uses connectives)</li> <li>• Uses geographical terms and vocabulary</li> </ul> |
| 1 (basic) | 1–2   | <ul style="list-style-type: none"> <li>• Basic throughout with limited supporting evidence and/or examples</li> <li>• Communicates limited knowledge and understanding</li> <li>• Explanations are partial</li> <li>• Little or no use of geographical terms and vocabulary</li> </ul>   |
|           | 0     | No relevant content  |

Example answer: *Meanders are formed when a river meets a small obstacle, forcing it to slightly change its course to bend around the obstacle. Erosion through hydraulic action will take place on the outside of this curve because the water is flowing faster. This will make the bend more pronounced. On the inside of the*

*bend, the water flows more slowly and will deposit material. Over time, erosion on the outside of the bend and deposition on the inside of the bend will combine to form large meanders in the river.*

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

| Level        | Marks | Description  |
|--------------|-------|--|
| 2<br>(clear) | 3–4   | <ul style="list-style-type: none"> <li>• Sound, organised and relevant throughout, using supporting evidence and examples</li> <li>• Communicates good knowledge and understanding</li> <li>• Communicates using developed statements and ideas (e.g. uses connectives)</li> <li>• Uses geographical terms and vocabulary</li> </ul> |
| 1<br>(basic) | 1–2   | <ul style="list-style-type: none"> <li>• Basic throughout with limited supporting evidence and/or examples</li> <li>• Communicates limited knowledge and understanding</li> <li>• Explanations are partial</li> <li>• Little or no use of geographical terms and vocabulary</li> </ul>   |
|              | 0     | No relevant content  |

*Example answer: Figure 3 shows a large meander in the river. In the future it is likely that the neck of the meander will narrow, allowing the river to cut through this neck and take a straighter course. This will happen because water moves faster on the outside of a bend and erodes the river bank through hydraulic action. Erosion on both bends in the meander neck will mean the neck cuts through, leaving the meander cut off from the river as an ox-bow lake.*

**3.5** Erosion

**3.6** Deposition

**3.7** Flood plains are large areas of flat land either side of a river.

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

| Level        | Marks | Description  |
|--------------|-------|--|
| 2<br>(clear) | 3–4   | <ul style="list-style-type: none"> <li>• Sound, organised and relevant throughout, using supporting evidence and examples</li> <li>• Communicates good knowledge and understanding</li> <li>• Communicates using developed statements and ideas (e.g. uses connectives)</li> <li>• Uses geographical terms and vocabulary</li> </ul> |
| 1<br>(basic) | 1–2   | <ul style="list-style-type: none"> <li>• Basic throughout with limited supporting evidence and/or examples</li> <li>• Communicates limited knowledge and understanding</li> <li>• Explanations are partial</li> <li>• Little or no use of geographical terms and vocabulary</li> </ul>   |
|              | 0     | No relevant content  |

*Example answer: Levées are mounds of sediment either side of a river and are typically found in the lower course. They are formed through repeated river flooding. When a river bursts its banks, it spreads across the flood plain and slows down. As it slows, deposits the material it is carrying. The river will deposit the largest material first and this takes place either side of the river channel, gradually forming levées.*

**3.9** Deposition takes place when a river slows down. In a river estuary, the river meets the incoming sea. This will slow the flow of the river and make it deposit what it is carrying.

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

| Level        | Marks | Description   |
|--------------|-------|---|
| 3 (detailed) | 7–9   | <ul style="list-style-type: none"> <li>• Thorough, detailed, organised, and relevant throughout with supporting evidence and examples</li> <li>• Communicates detailed, clear knowledge and understanding</li> <li>• Communicates using developed statements and ideas (e.g. uses connectives to fully explore ideas)</li> <li>• Good use of geographical terms and vocabulary</li> </ul> |
| 2 (clear)    | 4–6   | <ul style="list-style-type: none"> <li>• Sound throughout with some supporting evidence and examples</li> <li>• Communicates some knowledge and understanding</li> <li>• Communicates using linked statements and ideas (e.g. uses connectives, but needs further development)</li> <li>• Some use of geographical terms and vocabulary</li> </ul>  |
| 1 (basic)    | 1–3   | <ul style="list-style-type: none"> <li>• Basic throughout with limited supporting evidence and/or examples</li> <li>• Communicates limited knowledge and understanding</li> <li>• Communicates using simple statements that are not developed</li> <li>• Little or no use of geographical terms and vocabulary</li> </ul>   |
|              | 0     | No relevant content   |

**3-marks: SPaG** (spelling, punctuation, grammar, and specialist terminology)

| Marks | Description   |
|-------|---|
| 3     | <ul style="list-style-type: none"> <li>• Accurate spelling and punctuation</li> <li>• Rules of grammar followed</li> <li>• Effective control of meaning</li> <li>• Uses wide range of specialist terms</li> </ul>                                       |
| 2     | <ul style="list-style-type: none"> <li>• Generally accurate spelling and punctuation</li> <li>• Most rules of grammar followed</li> <li>• General control of meaning</li> <li>• Uses good range of specialist terms</li> </ul>                          |
| 1     | <ul style="list-style-type: none"> <li>• Reasonably accurate spelling and punctuation</li> <li>• Some rules of grammar followed – errors do not hinder meaning</li> <li>• Some control of meaning</li> <li>• Limited use of specialist terms</li> </ul> |
| 0     | <ul style="list-style-type: none"> <li>• Writes nothing</li> <li>• Does not relate to question</li> <li>• Basic grasp of spelling, punctuation, and grammar prevents clear meaning</li> </ul>   |

Example answer: *The River Tees has its source in the Pennines and flows from the Pennines to its mouth in the North Sea near Stockton-on-Tees. It is famous for High Force Waterfall, which was formed because the river is flowing over resistant rock called dolerite but meets a band of less resistant rock called limestone. The limestone erodes more quickly than the dolerite through processes like hydraulic action and abrasion. This led to a step in the river channel and over time, continued erosion created a 20m drop with a large*

*plunge pool at its base. Water swirling around in the plunge pool undercut the dolerite cap rock which collapsed meaning the waterfall retreated upstream to form a gorge.*

*The Tees also has many meanders in its middle course, particularly at the town of Yarm, which is enclosed by a large meander. Meanders are formed because water flows faster on the outside of a bend, enlarging the bend through hydraulic action and abrasion. At the same time, the slower water on the inside is depositing sediment, leading the formation of large meanders.*