

## Rivers – MARK SCHEME

- 1
1. C
  2. D
  3. B
  4. A

All correct = 3; 2 correct = 2; 1 correct = 1.

3  
AO1 – 3  
**[3]**

- 2
- A river transports large boulders (1) via traction – where material is rolled / dragged along the bed (1). Smaller pebbles (1) are carried by saltation – a hopping / leapfrogging motion (1). Fine material is carried within the water itself (1) – this is suspension. Some rocks are soluble and will dissolve (1) – such as limestone (1) – and these are carried in solution.
- Allow 1 mark for a list. 2 terms or more.  
Allow up to 2 marks on any one process.  
3 × 1

AO1 – 3  
**[3]**

- 3 (a) Any valid characteristic such as stepped profile of waterfall, the fact that river veers to left above waterfall, has clearly downcut bed here more, white water, plunge pool, undercutting of the lower rock layer, the presence of two rock layers. No credit for waterfall only.

3 x 1

AO2 = 2

AO3 = 1

- (b) Likely explanation will refer to horizontal bands of hard rock and soft rock; hard rock will form cap rock with underlying band of soft rock exposed; erosion of softer rock at a faster rate causes an overhang to develop; abrasion and hydraulic action are particularly important erosion processes; material from overhang collapsing increases rate of erosion and waterfall plunges over steep drop created. Diagrams if included should be credited as an integral part of the answer.

AO1 = 4

Level	Marks	Description
2 (Clear)	3 – 4	Complete, clear sequence. Statements are developed and linked in a logical order.  <i>There are layers of horizontal rock. Hard rock is on top of soft. Where the soft is on the surface next to the hard, it is eroded faster by abrasion and hydraulic action and an overhang is created of the cap rock. Over time, this gets bigger and eventually it collapses creating a waterfall. Repeated erosion by material in the plunge pool deepens the waterfall.</i>
1 (Basic)	1 – 2	Simple points - partial sequence. Statements are separate in a random order – jumps about / sequence not correct.  <i>River erodes rock downwards. There is hard and soft rock. The overhang collapses and the water flows down a steep drop.</i>
	0	No relevant content.

[7]

- 4 A. Ox-bow lake  
B. Meander  
C. Flood plain  
D. Estuary

One correct – 1 mark

Two correct – 2 marks

Three or four correct – 3 marks

AO3 = 3

[3]

- 5 Flood plains form due to both erosion and deposition. Erosion widens the valley taking away the interlocking spurs present nearer the source and creating wide, flat area next to the river. Lateral erosion may be named (perhaps linked to meander migration) as may some erosion processes. Deposition is also partly responsible for the formation of a flood plain. When the river overflows, material being carried is dropped as speed / energy is lost. Over time, this sediment forms layers on the flood plain, building it up.

**Level 1 (Basic) 1–2 marks**

Simple statements.

Order may jump about.

Sequence may be incomplete.

*The river floods and leaves material on the flood plain. This is wide near the mouth.*

*Meanders are found on the flood plain.*

**Level 2 (Clear) 3–4 marks**

Statements are developed and linked.

Sequence and formation of flood plain is clear.

May focus on just deposition or erosion.

*The narrow valley is widened as the river begins to erode sideways. The meanders create a wide, flat valley floor which is the flood plain. As the river floods, sediment is deposited on this wide area and its level is built up to form the flat area on either side of the river.*

AO1 – 3

AO2 – 1

[4]

- 6 Velocity, deposit, banks, channel.

[4]

7

Level	Marks	Description
2 (Clear)	3 – 4	AO3 Demonstrates sound application of knowledge and understanding in interpreting the diagram and giving clear explanation as to how the flood management scheme reduces the risk of flooding.  AO3 Clear analysis of the resource, using evidence to support the response.
1 (Basic)	1 – 2	AO1 Shows some knowledge of the methods used in flood management schemes to reduce the risk of flooding.  AO2 Shows some understanding of how the flood management scheme reduces the risk of flooding.
	0	No relevant content.

#### Indicative content

- Students who simply describe the methods used will be restricted to lower levels.
- Description implies an understanding of how the methods work.
- At the higher level students should show some awareness of how the individual methods used in the scheme reduce the risk of flooding.

AO1 = 1

AO2 = 1

AO3 = 2

**[4]**