

Geography AQA

Paper 1. Section C – Physical landscapes in the UK

Rivers

Exam Booklet

3.1.3.3 River landscapes in the UK

EXAM

Key idea	Specification content
The shape of river valleys changes as rivers flow downstream.	The long profile and changing cross profile of a river and its valley. Fluvial processes: - erosion – hydraulic action, abrasion, attrition, solution, vertical and lateral erosion - transportation – traction, saltation, suspension and solution - deposition – why rivers deposit sediment.
Distinctive fluvial landforms result from different physical processes.	Characteristics and formation of landforms resulting from erosion – interlocking spurs, waterfalls and gorges. Characteristics and formation of landforms resulting from erosion and deposition – meanders and ox-bow lakes. Characteristics and formation of landforms resulting from deposition – levées, flood plains and estuaries. An example of a river valley in the UK to identify its major landforms of erosion and deposition.
Different management strategies can be used to protect river landscapes from the effects of flooding.	How physical and human factors affect the flood risk – precipitation, geology, relief and land use. The use of hydrographs to show the relationship between precipitation and discharge. The costs and benefits of the following management strategies: - hard engineering – dams and reservoirs, straightening, embankments, flood relief channels - soft engineering – flood warnings and preparation, flood plain zoning, planting trees and river restoration. An example of a flood management scheme in the UK to show: - why the scheme was required - the management strategy - the social, economic and environmental issues.

PRACTISE QUESTIONS

1. Describe how the characteristics of the river channel and valley changes as it moves downstream (from upper → lower course) (3 marks) *pg.49 in revision guide*

Characteristic of the river	(D) escribe
Shape of the valley	
Width of the channel	
Depth of the channel	

2. Explain how vertical erosion changes the cross profile in the upper course of the river (2 marks) *pg.49 in revision guide*

(K)nowledge	(U)nderstanding

3. Explain how lateral erosion changes the cross profile of a river in the middle and lower course of the river (2 marks) *pg.49 in revision guide*

(K)nowledge	(U)nderstanding

4. Define the four types of erosion (4 marks) *pg.50 in revision guide*

Type of erosion	Definition
Hydraulic action	
Abrasion	
Attrition	
Solution	

5. Define the four types of transportation (4 marks) *pg.50 in revision guide*

Type of erosion	Definition
Traction	
Saltation	
Suspension	
Solution	

6. Deposition occurs when the river loses velocity and energy. State one reason why rivers slow down and deposit material. (1 mark) *pg.50 in revision guide*

Description

7. Explain how the landforms shown in the figure below are created by physical processes. (5 marks) *pg.51 in revision guide*



Step 1	
Step 2	
Step 3	
Step 4	
Step 5	

8. Identify the landform shown in the figure below (1 mark) *pg.51 in revision guide*



Description

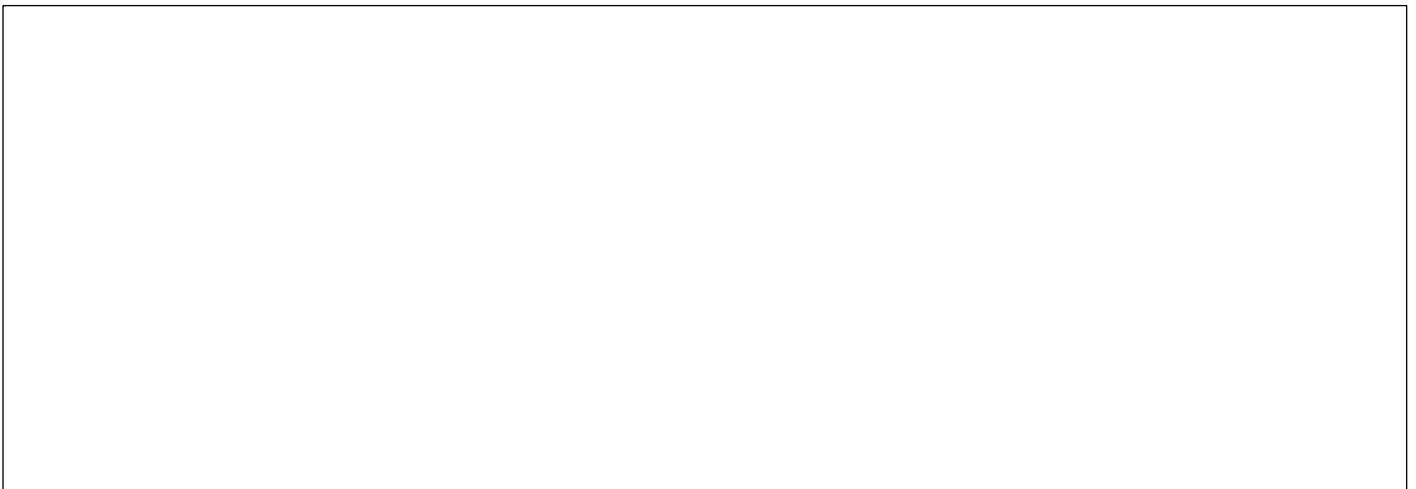
9. Put the statements below into the correct order to explain the formation of interlocking spurs. (5 marks) *pg.51 in revision guide*

Statement	Correct number (1→5)
a) This means the river winds around the hillsides of harder rock.	
b) This creates a steep sided, V-shaped valley.	
c) This creates hills that interlock with each other either side of the valley.	
d) In the upper course of the river most of the erosion is vertical which creates a steep sided, V-shaped valley.	
e) In the upper course there is little lateral erosion as the rivers lack power.	

10. Explain the formation of a meander (4 marks) *pg.52 in revision guide*

Step 1	
Step 2	
Step 3	
Step 4	

11. Explain how oxbow lakes are formed. You may use a diagram to support. (6 marks) *pg.52 in revision guide*



Step 1	
Step 2	
Step 3	
Step 4	

14. Explain the formation of a flood plain. You may use a diagram to support (4 marks) *pg.53 in revision guide*

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Step 1	
Step 2	
Step 3	
Step 4	

15. Explain how levées are formed. (4 marks) *pg.53 in revision guide*

Step 1	
Step 2	
Step 3	
Step 4	

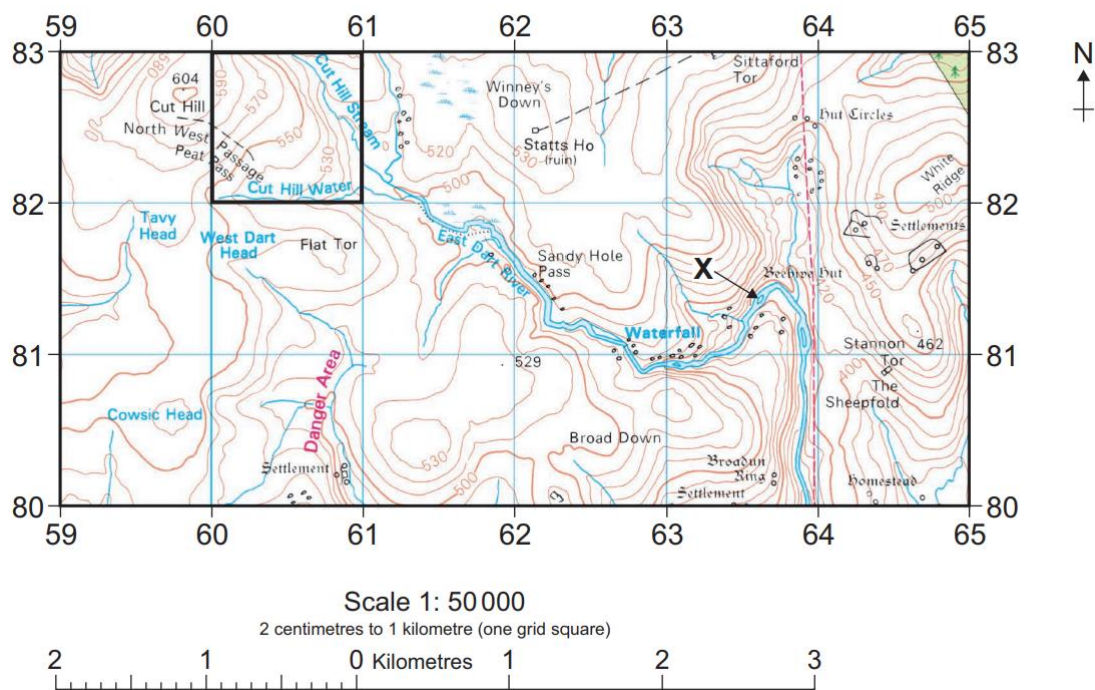
16. Explain how estuaries are formed. (4 marks) *pg.53 in revision guide*

Step 1	
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Step 2	
Step 3	
Step 4	

17. Using Figure 12, identify a feature of the East Dart River at 627811. *pg.54 in revision guide*

Figure 12

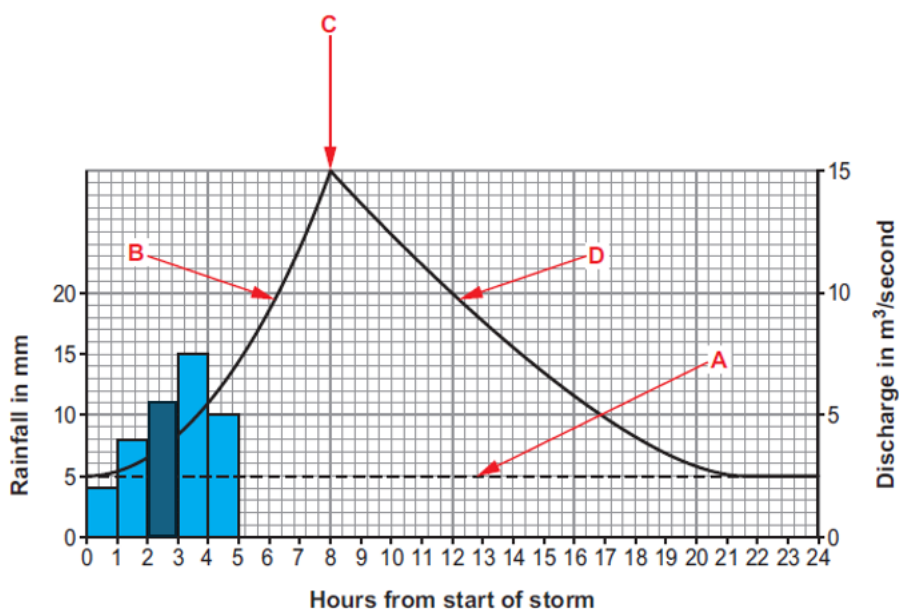


Description

18. Using Figure 12, describe the relief (height and shape of the land) in the highlighted grid square 6082 (2 marks) *pg.54 in revision guide*

(D) escribe	(D) escribe

19. Identify the following features A-D on the hydrograph below. *pg.56 in revision guide*



A	
B	
C	
D	

20. Define the term lag time (1 mark) *pg.56 in revision guide*

Description

21. Explain how two physical factors can increase flood risk. (4 marks) *pg.56 in revision guide*

(K)nowledge	(U)nderstanding
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(K)nowledge	(U)nderstanding

22. Explain how two human factors can increase the flood risk (4 marks) *pg.56 in revision guide*

(K)nowledge	(U)nderstanding
(K)nowledge	(U)nderstanding

23. Explain how two hard engineering strategies can prevent flooding. (6 marks) *pg.57 in revision guide*

(K)nowledge	(U)nderstanding	(U)nderstanding
(K)nowledge	(U)nderstanding	(U)nderstanding

24. Explain one disadvantage of a named hard engineering strategy (2 marks) *pg.57 in revision guide*

(K)nowledge	(U)nderstanding
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25. Explain one cost one benefit of using soft engineering to manage the flood risk. (4 marks)
pg.57 in revision guide

(K) nowledge	(U) nderstanding	(U) nderstanding
(K) nowledge	(U) nderstanding	(U) nderstanding

26. Using a flood management scheme in the UK, Explain why the scheme was needed (2 marks)
pg.58 in revision guide

(K) nowledge	(U) nderstanding

27. Describe two characteristics of the scheme (2 marks) *pg.58 in revision guide*

(D) escribe	(D) escribe

28. Explain one economic issue of a flood management scheme you have studied (3 marks)
pg.58 in revision guide

(K) nowledge	(U) nderstanding	

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29. Explain one social issue and one environmental issue of a flood management scheme you have studied (6 marks) *pg.58 in revision guide*

(K) nowledge SOCIAL	(U) nderstanding	(U) nderstanding
(K) nowledge ENVIRONMENTAL	(U) nderstanding	(U) nderstanding

Question	“Physical factors are the biggest reason why rivers flood.” To what extent do you agree with this statement? (6 marks)			
	A (application)	K (knowledge)	U (understanding)	U (understanding)
Paragraph 1				
Paragraph 2 (Challenge – grade 6 +)				
Conclusion (Challenge – grade 8+)				

Question	Discuss the social and economic issues of a flood management scheme you have studied (6 marks)			
	A (application)	K (knowledge)	U (understanding)	U (understanding)
Paragraph 1				
Paragraph 2 (Challenge – grade 6 +)				
Conclusion (Challenge – grade 8+)				