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**GEOGRAPHY**

**2217/23**

Paper 2

**October/November 2018**

INSERT

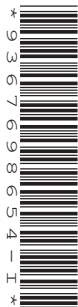
**2 hours 15 minutes**

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**READ THESE INSTRUCTIONS FIRST**

This Insert contains Fig. 2.1 for Question 2, Figs. 7.1, 7.2, 7.3, 7.4 and Tables 7.2, 7.3 and 7.4 for Question 7 and Table 8.1 for Question 8.

The Insert is **not** required by the Examiner.



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This document consists of **9** printed pages and **3** blank pages.

**Fig. 2.1 for Question 2**

**A rural area in Scotland**



Fig. 7.1 for Question 7

Ashes Hollow stream



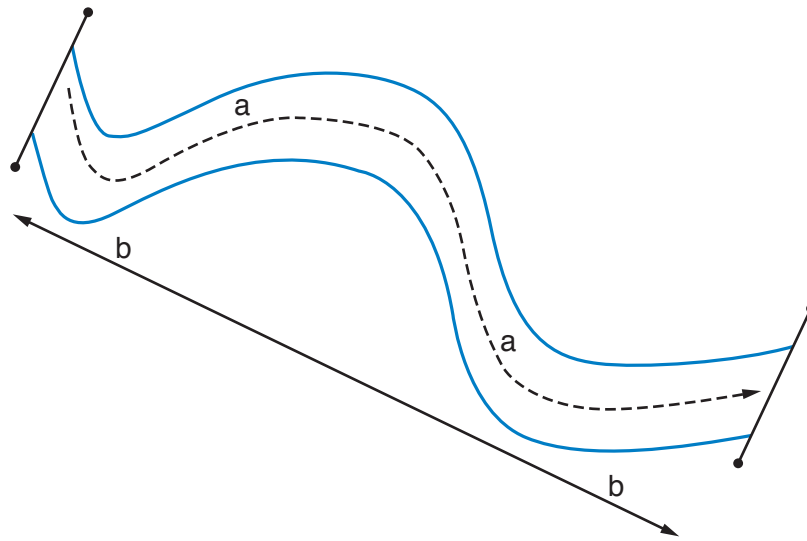
**Fig. 7.2 for Question 7**

**Ashes Hollow waterfall**



Fig. 7.3 for Question 7

## Sinuosity of a stream



$$\text{Sinuosity} = \frac{a}{b}$$

a is the distance measured along the stream (m)

b is the straight line distance (m)

Fig. 7.4 for Question 7

Photographs from student's notebook showing measurement methods

Photograph A



Photograph B



Photograph C



Table 7.2 for Question 7

## Channel cross sectional area at the 12 sites


Site number		Cross sectional area of channel (sqm)
1	upstream  downstream	0.12
2		1.52
3		<b>0.51</b>
4		0.32
5		1.65
6		0.71
<b>waterfall</b>		
7		0.23
8		3.65
9		0.89
10		1.83
11		4.21
12	0.84	

Table 7.3 for Question 7

## Sinuosity score at the 12 sites

Site number		Distance measured along stream (m)	Straight line distance (m)	Sinuosity score	Average sinuosity score
1	upstream ↑	119.4	100	1.19	sites 1–6 = 1.11
2		118.0	100	1.18	
3		117.1	100	1.17	
4		105.5	100	1.06	
5		101.4	100	1.01	
6		104.0	100	1.04	
<b>waterfall</b>					
7	↓ downstream	120.8	100	1.21	sites 7–12 = 1.35
8		114.0	100	1.14	
9		162.7	100	1.63	
10		153.0	100	<b>1.53</b>	
11		124.2	100	1.24	
12		137.1	100	1.37	

Table 7.4 for Question 7

## Width of valley floor

Site number		Width of valley floor (m)
1	upstream ↑	2.4
2		18.2
3		24.7
4		5.0
5		16.7
6		8.8
<b>waterfall</b>		
7	↓ downstream	4.2
8		<b>8.4</b>
9		6.1
10		10.3
11		21.1
12		28.0



Table 8.1 for Question 8

## Results of environmental quality survey

Main land use	Site reference	Distance from town centre (km)	Environmental quality score
Industry	IN1	2.6	10
	IN2	3.5	8
	IN3	4.6	11
	IN4	5.5	17
	IN5	1.2	7
			<b>Average = 10.6</b>
Open space	O1	5.8	12
	O2	3.1	16
	O3	4.0	6
	O4	1.0	13
	O5	4.5	15
			Average = 12.4
Residential	R1	1.4	<b>8</b>
	R2	5.3	10
	R3	3.8	20
	R4	4.4	17
	R5	2.0	12
			Average = 13.4
Shops	S1	0.2	20
	S2	0.8	17
	S3	5.1	16
	S4	2.9	13
	S5	<b>1.7</b>	<b>15</b>
			Average = 16.2





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