Cambridge Assessment International Education

Cambridge IGCSE™

GEOGRAPHY **0460/42**

Paper 4 Alternative to Coursework **May/June 2024**

INSERT **1 hour 30 minutes**

INFORMATION

- This insert contains additional resources referred to in the questions.
- You may annotate this insert and use the blank spaces for planning. **Do not write your answers** on the insert.

DC (SL/CT) 329438/4

Table 1.1 for Question 1

Risk assessment of hazards

description of the hazard	**chance of the hazard happening** 1 (little chance) to 5 (greatest chance)	**how severe the impacts would be** 1 (little danger) to 5 (very dangerous)	**risk from the hazard** (chance of it happening × how severe the impacts would be)	**management** (what can be done to reduce the risk)
volcano erupts	1	5	5	check volcanic activity before setting off
wild animals	2	3	6	do not disturb or go close to them
extreme weather	4	4	16	check the weather forecast before setting off
hypothermia from getting cold and wet	3	4	12	
uneven ground and slippery rocks	2	2	4	
getting lost or separated from others	2	3	6	

Fig. 1.1 for Question 1

Fieldwork equipment

Table 1.2 for Question 1

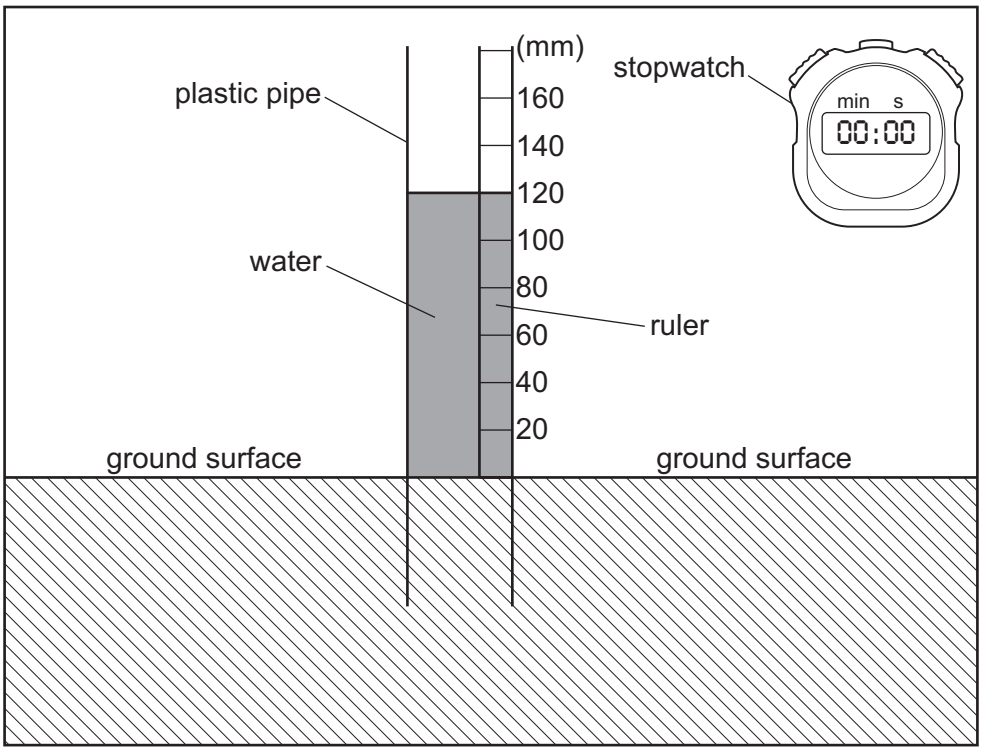
Results of vegetation cover measurements

	site A at 3700 m above sea level			site B at 3780 m above sea level			site C at 3850 m above sea level		
	measurement 1 (%)	measurement 2 (%)	average (%)	measurement 1 (%)	measurement 2 (%)	average (%)	measurement 1 (%)	measurement 2 (%)	average (%)
bare rock	12	9	11	20	70	45	97	92	94
bare soil	40	61	50	60	9	35	0	2	1
sparse vegetation cover	14	4	9	3	6	4	3	5	4
medium vegetation cover	18	12	15	10	13	**12**	0	0.5	1
dense vegetation cover	16	14	15	7	2	**4**	0	0	0

Average percentage figures have been rounded up or down to whole numbers.

Fig. 1.3 for Question 1

How the students measured infiltration



The students used a **plastic pipe** which they pushed into the ground to the same depth at each site. The students put a **ruler** which measured in millimetres inside the pipe. They poured water into the pipe up to a height of 120 mm. They recorded the water height in the pipe after 10 minutes, timed by a **stopwatch**.

Table 1.3 for Question 1

Results of infiltration measurements

fall in water level at site A at 3700 m above sea level (mm)		**fall in water level at site B at 3780 m above sea level (mm)**		**fall in water level at site C at 3850 m above sea level (mm)**	
measurement 1	15	measurement 1	55	measurement 1	85
measurement 2	10	measurement 2	40	measurement 2	14
average	12.5	average	**47.5**	average	49.5

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Fig. 2.1 for Question 2

Residential areas in Hong Kong

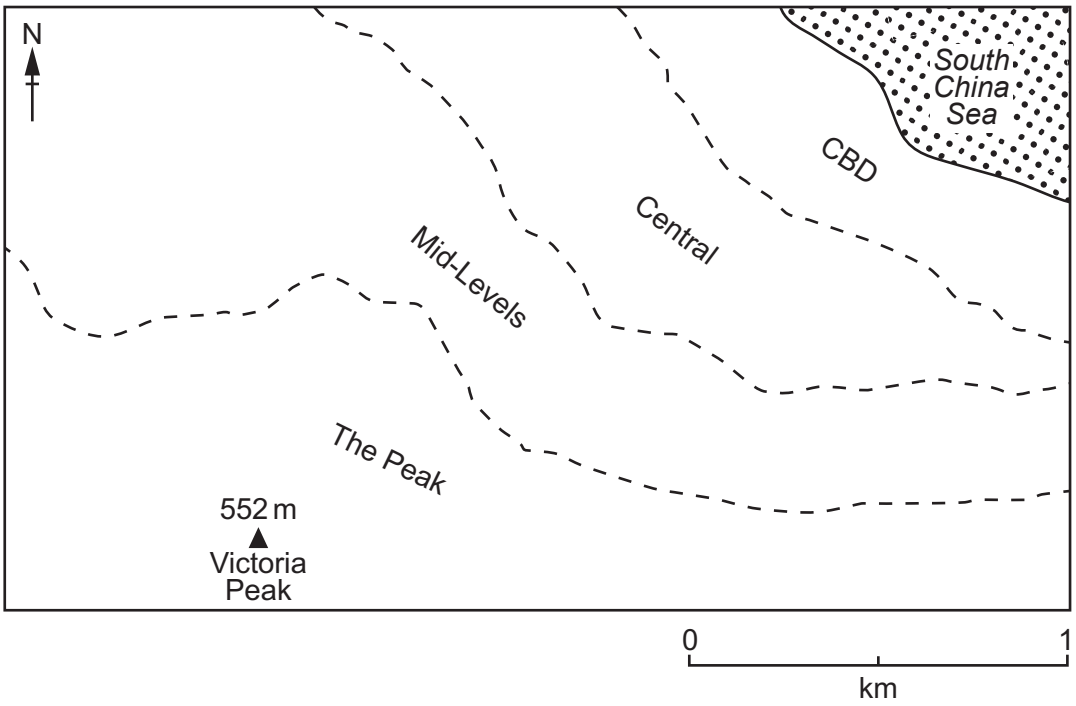

Fig. 2.2 for Question 2

Student survey recording sheet

Environmental quality survey					
Residential area: The Peak Mid-Levels Central (circle the area)					
	–2	**–1**	**0**	**+1**	**+2**
	bad ◄——————————————————————► good				
feature					
traffic congestion					
noise level					
air quality					
safety					
cleanliness					
vegetation					
amenities					
vandalism and graffiti					

Table 2.1 for Question 2

Results of environmental quality survey

	The Peak	**Mid-Levels**	**Central**
traffic congestion	+2	–1	–2
noise level	+2	0	–2
air quality	+2	+1	–1
safety	+2	+1	–1
cleanliness	+1	-1	0
vegetation	+2	**+1**	–1
amenities	0	**+1**	+1
vandalism and graffiti	+2	**+2**	+1
total score	+13	+4	–5

Table 2.2 for Question 2

Results of noise level measurements

residential area	measuring site	noise level (decibels)
The Peak	1	65
	2	71
	3	64
Mid-Levels	4	78
	5	75
	6	78
	7	77
Central	8	81
	9	80
	10	80
	11	80
	12	85

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Table 2.3 for Question 2

Results of traffic count

residential area		measuring site	number of vehicles
The Peak	edge of city ↑	1	60
		2	31
		3	72
Mid-Levels		4	69
		5	77
		6	91
		7	19
Central		8	80
		9	59
		10	**76**
		11	28
	↓ edge of CBD	12	49

Table 2.4 for Question 2

Types of vehicles at three sites

vehicle category	The Peak (site 1)	Mid-Levels (site 5)	Central (site 10)
	percentage of vehicles (%)		
bicycle/motorbike	14	9	3
car	41	45	43
taxi	39	11	14
bus/coach	1	**9**	6
van/lorry/truck	5	**26**	34

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