



GEOGRAPHY

0460/41

Paper 4 Alternative to Coursework

October/November 2017

MARK SCHEME

Maximum Mark: 60

Published

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This document consists of **6** printed pages.

Question	Answer	Marks												
1(a)	<p>Accessibility (from road / school) (Safety) – strength of current / speed of flow Depth / sharp rocks / width / stability of banks / specified dangerous animals (Equal) distance from other investigation sites / spread out / upstream and downstream / upper-middle-lower course Away from human impact / weir / artificial levees / dam Away from waterfalls / rapids</p>	3 3 @ 1												
1(b)(i)	<p>Ranging poles Tape measure</p>	2 1 + 1												
1(b)(ii)	<p>Put ranging poles / students stand on opposite banks / sides of river Measure across river / from bank to bank / between ranging poles Keep tape measure taut / horizontal / stretched / tight / at same level Measure perpendicular / at right angles to banks / straight across / directly opposite</p>	2												
1(c)(i)	<p>Plotting points on cross-section</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Distance across channel (m)</th> <th>Depth (m)</th> <th></th> </tr> </thead> <tbody> <tr> <td>5.6</td> <td>0.40</td> <td>✓</td> </tr> <tr> <td>5.8</td> <td>0.48</td> <td>✓</td> </tr> <tr> <td>6.0</td> <td>0.43</td> <td></td> </tr> </tbody> </table> <p>shade in cross-sectional area</p>	Distance across channel (m)	Depth (m)		5.6	0.40	✓	5.8	0.48	✓	6.0	0.43		<p>2 marks: 3</p> <p>1 mark</p>
Distance across channel (m)	Depth (m)													
5.6	0.40	✓												
5.8	0.48	✓												
6.0	0.43													
1(c)(ii)	<p>At site 2 / Fig. 1 Cross-section is narrower / less distance across Cross-section is shallower Cross-section is more irregular Cross-section is smaller / smaller channel area</p> <p>Accept 'only' with stats Answers must be comparative</p>	2 2 @ 1												
1(d)(i)	Width x mean (average) depth	1												
1(d)(ii)	<p>Hypothesis is correct / true – 1 mark reserve</p> <p>paired data from any two sites e.g. Site 1 / 3 km / first site – area = 0.32 (sq m) and site 6 / 37 km / last site – area = 9.44 (sq m)</p> <p>No credit for Hypothesis is false / incorrect If no hypothesis conclusion credit evidence</p>	2 1 mark												

Question	Answer	Marks
2(b)(iii)	Hypothesis is true / correct 1 mark reserve paired data to compare shops and services: 2 marks High order goods = 39% and low order goods = 20% High order services = 27% and low order services = 14% High order goods and services = 66% and low order goods and services = 34% No credit for Hypothesis is false / incorrect If no hypothesis conclusion credit evidence	3
2(b)(iv)	Many / some shops / services are middle order / would be wrong to classify middle order as high or low order / some shops cannot be classified as low or high order Including middle order would make study more realistic / valid / fair / accurate / reliable 2 @ 1	2
2(c)(i)	0–19 / under 20 / 19 and under and 40–59 Both age groups needed	1
2(c)(ii)	Stratified / quota: Find out gender / age balance of shoppers Ask a balanced number / proportionate number of people of different age group / gender OR Get people of different ages / gender / male and female 1 mark Systematic: Choose people at regular intervals Every tenth person who passes them (accept 2nd, 5th etc.) Random: Use random number tables to generate order to ask people Choose people who fit the sequence identified OR Ask anybody / next person / no pattern 1 mark	3
2(c)(iii)	Work in pairs / small groups / not alone / don't work in large groups Don't block pavement / entrance to shops Be polite / kind / respectful to interviewees / say thank you / do not ask age or gender / estimate age or gender Accept that people won't want to answer questions / too busy / in a hurry / don't force to answer Choose a time when there are plenty of people shopping Ask people leaving different shops / spread out evenly Avoid 'dangerous' people / 'dangerous places' 2 @ 1	2
2(d)(i)	Completion of flow lines – Sumidouro = 10 and Sao Jorge = 3 2 @ 1	2

Question	Answer	Marks
2(d)(ii)	<p>Sphere of influence extends mainly / further to north / north east OR most people come from north / north east</p> <p>Sphere of influence also extends to south / south west OR some / least people come from south / south west</p> <p>Sphere of influence does not extend to east / does extend to west OR few come from east / some come from west / more come from west than east</p> <p>Credit supporting data 1 mark maximum e.g. Cordeira is 30 km from Nova Friburgo and Santo Andre is 12 km Settlement data must be comparative and from different directions OR People come from 30 km from north, 30 km from south, 11 km from west, 8 km from east (any 2)</p>	3
2(d)(iii)	Completion of bars – car = 30, bicycle = 9 2 @ 1	2
2(d)(iv)	<p>Most settlements are in north / uneven distribution of settlements No settlements in the uplands / settlements in lowlands / uplands are unevenly distributed / relief varies/ no uplands in north / uplands in south / east</p> <p>Access to roads varies / easier access from north / more roads from north / roads are unevenly distributed / 4 roads from north and 1 road from south / more accessible by road</p> <p>Rio de Janeiro will restrict sphere of influence (to the south)</p>	3