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**GEOGRAPHY**

**0460/43**

Paper 4 Alternative to Coursework

**May/June 2017**

MARK SCHEME

Maximum Mark: 60

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**Published**

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

Question	Answer	Marks
1(a)(i)	A: source B: confluence	2
1(b)	Agree methodology on what measurements to take Find out what doesn't work / change it / avoid mistakes Practise fieldwork techniques / learn how to do Test / learn how to use equipment Experience of working as a team / team organisation Find out how long to allocate each task	2
1(c)	Width of channel: Stretch tape measure across river / from bank to bank / side to side Keep tape measure taut / horizontal / stretched / tight Measure perpendicular / at right angles to banks / straight across / directly opposite Measure where tape touches the bank  Depth of river: Rest ruler on river bed / bottom Measure vertically / perpendicular to surface Measure where water level is / wet part of ruler Measure at equal points / 25–30 cm across channel	4
1(d)(i)	Completion of cross section and shading 0.5 m at 2.9 m, 0.35 m at 4.2 m 1 mark for each plot and no credit for shading	2
1(d)(ii)	Site 4	1
1(d)(iii)	Hypothesis is <b>true / partially true / mainly true / except for</b> – 1 mark reserve (✓HA) If true – no credit for anomaly If partially true – reserve 1 mark for anomaly Two marks for supporting data – need 2 site numbers and 2 measurements Wider: 1.2 m at site 1 to 12.4 m at site 5 / increases by 11.2 m (credit any 2 sites) Deeper: 0.2 m at site 1 to 0.6 m at site 5 / increases by 0.4 m (credit any 2 sites) Anomaly between sites 4 and 5 – depth is 0.9 m at site 4 and 0.6 m at site 5	3
1(e)(i)	Classification is subjective / based on student judgement Classes of pebbles are very similar / hard to distinguish between classes	1
1(e)(ii)	Pebbles selected may not be typical of the pebbles at that site / bigger than other pebbles / smaller than other pebbles / anomalies / not representative All pebbles may have been taken from same area of river bed / not across river channel / areas missed out Not a fair / reliable sample / bias / student preference	2
1(e)(iii)	Completion of divided bar graph for site 2: Very angular = 9, angular = 4, slightly angular = 6, slightly rounded = 1 2 marks for dividing lines, 1 mark for shading	3

Question	Answer	Marks
1(e)(iv)	Slightly angular = 12, slightly rounded = 24, rounded = 14, very rounded = 2 (Do not need 0 in very angular and angular)	1
1(e)(v)	<b>Total score</b> decreases from sites 1 / 2 to sites 4 / 5 Sites 2 / 5 are anomalies – <b>higher score</b> than previous site Very angular pebbles only found at sites 1 and 2 / not found at sites 3, 4 and 5 Rounded / very rounded pebbles only found at sites 3, 4 and 5 / not found at sites 1 and 2  Credit 2 marks max (not reserve) for paired data based on <b>total scores</b> , e.g. Site 1 = 94 and site 5 = 63 to agree with conclusion Site 1 = 94 and site 2 = 101 to explain partly true / anomaly	3
1(e)(vi)	Erosion / pebbles crash into each other / pebbles crash into bed or banks / collide with each other  Attrition Longer duration of transport / longer time to be eroded / been in river longer / water smooths pebbles as they go downstream	2
1(e)(ii)	Completion of isoline Line must go between sites 3 and 8 and join up with existing isoline	2
1(f)(i)	Callipers	1
1(f)(ii)	Measure long axis / length of pebble Repeat size measurements to check accuracy / another student checks measuring Sample / measure several / 2–20 pebbles at each site and calculate average of measurements Use same sites 1–5 / sites downstream / select new sites / sites equal distance apart Use systematic sampling / pick pebbles across width of river  No reserve mark for method or reliability	3
	<b>Total:</b>	<b>30</b>

Question	Answer	Marks
2(a)(i)	Questionnaire is for tourists / only wanted to ask tourists / to see if they are tourists Not waste people's time / if not a tourist no need to continue If include non-tourists results will be unreliable / contain wrong information / inaccurate / irrelevant Some people they ask will not be tourists / eliminate residents	2
2(a)(ii)	Systematic	1
2(a)(iii)	Easy / quick method to undertake / don't need random numbers / don't need knowledge of population to be sampled Will not be biased / will be reliable / will be fair	2
2(b)(i)	Plot China = 16 and USA = 10 on Fig. 6 Must point in direction of Bagan	2
2(b)(ii)	Map: Shows direction of movement Gives information about distribution / pattern of countries Shows which area of world / where tourists come from / location Shows distance / how far tourists travel  Bar graphs: Easy to see number / how many / exact figure Easy to rank / see the order of importance / analyse Easy to compare different countries / values Separates Asian and non-Asian countries	2
2(b)(iii)	Hypothesis is <b>true</b> – 1 mark reserve 64(%) come from Asia / 28 more from Asia Two largest source countries are in Asia / Thailand and China / most come from Thailand and China  Credit 1 mark (not reserve) for accurate data to compare two bar graphs, e.g. 16 come from China / Thailand and 10 come from USA 16 come from Thailand and less than 10 from all countries outside Asia In Asia highest number is 16 and outside Asia highest number is 10	3
2(c)(i)	Plotting over 60 categories on histogram: Cultural and heritage = 19 People and traditions = 7 –1 mark if incorrect or no shading	2

Question	Answer	Marks
2(c)(ii)	<p>Hypothesis is <b>false / no / not supported</b> – 1 mark reserve (✓HA)            People in different age groups visit for the same reasons            (Main) attraction for people of all age groups is cultural and heritage sites            (Second) attraction for all age groups is people and their traditions            Other reasons / balloon rides / hot weather / restaurants and nightlife are unimportant for all age groups</p> <p>Credit 1 mark max for supporting statistics from at least two age groups e.g.            15 from 21–40 and 19 from over 60 visit cultural and heritage sites            1 from 0–20, 1 from 21–40, 0 from over 40 visit restaurants</p>	<b>4</b>
2(d)(i)	<p>Complete pie graph for Thailand            Plot 'people' = 19% and 'travel agent' = 37%            1 mark for dividing line, 1 mark for shading</p>	<b>2</b>
2(d)(ii)	<p><b>More</b> people used travel agent in China  <b>More</b> people used internet in Japan            Most use travel agent in China and most use internet in Japan            Credit 'only' with statistics</p>	<b>2</b>
2(e)(i)	<p>Advantages (to 3 marks maximum)            Brings money into the area / economy / increase GDP / sell to tourists / tourists buy products            Creates jobs for local people / e.g. of job            Local people experience cultures from other countries / share culture / local traditions across the world / preserves local culture            Improves local services / public transport / health / education            Locals can use tourist facilities / services            Multiplier effect</p> <p>Disadvantages (to 3 marks maximum)            Disturbance to local people / noise            Traffic congestion            Tourists don't respect local culture / alcohol / drugs / religious issues / racial tension / prostitution            Tourist hotels / development take up farmland / knock down houses            Hotels spoil the view            Tourist industry uses scarce resources / water / electricity            Air pollution / water pollution / waste / litter from tourist developments            Seasonal jobs            Increased price of goods / property            Loss of privacy</p> <p>Reserve 2 marks for advantages / disadvantages</p>	<b>5</b>

Question	Answer	Marks
2(e)(ii)	<p>1 mark for topic being investigated e.g. Water pollution Litter Decrease in vegetation</p> <p>1 mark for how it is being investigated e.g. Bi-polar analysis Quadrat Litter count Species identification Comparing photographs Environmental index</p> <p>1 mark for development of method with clear focus on natural environment e.g. Generic ideas about grouping, time of day, checking methodology Specific details of method</p>	<b>3</b>
	<b>Total:</b>	<b>30</b>