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CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the May/June 2015 series

0460 GEOGRAPHY

0460/42 Paper 4 (Alternative to Coursework), maximum raw mark 60

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1 (a) (i) Examples
To find out whether they are residents or tourists (1)
Students only want to ask local people/questionnaire is for residents (1)
Some people they approach will not be local people (1)
Not waste peoples/students time (1)
Tourist results will be unreliable/residents more reliable (1)
Tourists do not know the advantages + disadvantages/not there all year (1)
So that answers relate/relevant to the hypothesis (1)

(1 + 1) = 2 [2]

(ii) One mark for naming method and one mark for brief description.

If method wrong can give description mark if describes one of these three methods below accurately

Systematic sampling (1)
e.g. Ask every tenth/nth person/regular intervals (1).
OR
Random sampling (1)
e.g. Use random numbers/ask next person they meet/any order/ no specific order (1)
OR
Stratified sampling (1)
e.g. Ask appropriate age / gender balance / in proportion to population (1)

(1 + 1) = 2 [2]

(iii) Examples
Avoid bias / fair test (1)
Saves time / quicker (1)
Impossible to ask all people in the town (1)
Get a representative selection/range of people (1)

(1 + 1) = 2 [2]

(b) (i) Completion of bar graphs; one mark for each correct plot

Better public transport at 60, higher prices at 47

(1 + 1) = 2 [2]

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(ii) Hypothesis is true – 1 mark reserve

More/majority/over half residents/people think there are advantages than disadvantages (1)

464 answers for advantages but only 282 disadvantages given/182 more answers for advantages (1)
129/150 residents agree more ad> disadvantages/ only 21/150 disagree (1) OR 86% residents agree/14% disagree (1) OR 129 residents agree and 21 disagree (1)

More types/categories/wider range of advantages suggested than disadvantages (1)
7 advantages but only 5 disadvantages (1)

Credit paired comparative data to 2 marks max

(1HA + 1 + 1 + 1) = 4 [4]

(iii) Examples
More jobs means closer to home/less travel (1)
Reduces unemployment (1)
More money/higher income/reliable income (1)
Give local people a higher standard of living/better QoL (1)
More income for necessities / luxuries (1)
May improve local services e.g. education, hospitals (1)
Can generate further investment/local businesses/multiplier idea/boost local economy (1)

(1 + 1 + 1 + 1) = 4 [4]

(c) (i) Secondary data (1) [1]

(ii) Examples
Use a stopwatch to get exact time (1)
Count for same length of time (1)
Survey both locations at same time (1)
More than one student to count / record at each location (1)
Use a tally method (1)
Use a clicker/counter (1)
Take more readings and average/take readings on different days/seasons (1)

(1 + 1 + 1) = [3]

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(iii) Completion of line graph
16.00 @ 220, 18.00 @ 122

2 correct plots + line = 2 marks
2 correct plots but no line = 1 mark
1 correct plot + line = 1 mark,

(1 + 1) = 2 [2]

(iv) 1 statement mark MAX and 1 data mark MAX for each of X and Y. Accept statistics from graphs 4a/4b or table 2.

Location X:
Twice as many vehicles in summer than winter (1)
More traffic in summer at each survey time/summer line always above winter line (1)
Biggest difference in middle of day / between 12.00 & 14.00 (1)

At 12.00 on graph 380:160 OR at 14.00 350:140 (1)
On graph peak of 380 in summer higher than peak of 220 in winter (1)
From table: 1702 vehicles in summer but only 849 in winter/ 853 more in summer (1)
From table: 283.6 average in summer but only 141.5 average in winter (1)
From table: At 12.00 377:162 OR at 14.00 349: 139 (1)

Location Y:
Almost same amount of traffic in summer + winter/lines closer/lines cross (1)
More traffic in winter at three survey times (1)
Summer and winter figures are similar at all six survey times (1)

From graph peak of 370 in summer and 380 in winter (1)
From table 1874 vehicles in summer:1864 in winter/only 10 more vehicles in summer (1)
From table or graph: similar stats at 10.00 262:240/ 14.00 320:307/ 16.00 380:368 (1)

(1 + 1) x 2 =4 [4]

(v) X located near harbour / seafront/beach so more popular in summer/more tourists (1)
Y located inland / in suburbs/ motorway so more local people/residents (1)

(1 + 1) = 2 [2]

(d) Q1: Irrelevant to the topic of method of transport / intrusive / personal / not all will have a car (1)

Q2: Closed question / Yes and No question /does not consider other methods of transport / no need for Q2 as covered by Q3 (1)

(1 + 1) = 2 [2]

[Total: 30 marks]

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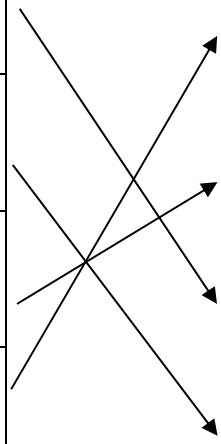
2 (a)

X		Y
Check the times of high tide		to wear appropriate clothing and take sunblock
Work in groups of three or four		to communicate with their teacher if they have a problem
Charge up their mobile (cell) phone		to know when it will be safe to make measurements on the beach
Check the weather forecast		to complete all their tasks and check their measurements



4 correct = 3 marks, 3 correct = 2 marks, 1 or 2 correct = 1 mark

(1 + 1 + 1) = 3 [3]

(b) Swash is stronger than backwash (1)
More than 13 waves per minute (1)

(1 + 1) = 2 [2]

(c) (i) Examples
Count number of waves breaking/crashing/reaching/going up beach/hitting object or person (1)
Count for specified time period (1)
Use a stopwatch / timer/ clicker (1)
Take an average of a number of counts (1)

(1 + 1 + 1) = 3 [3]

(ii) 7.6 or $7\,^{3}/_{5}$ [1]

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(d) (i) Examples
Lay tape measure on beach to create a transect/ perpendicular to beach (1)
Poles put at break of slope (1)
Measure distance between poles/sites/breaks of slope (1)
Poles must be vertical (1)
Read angle from lower pole (nearer to sea) to upper pole (further from sea) (1)
Student holds clinometer at top / at same marked height on ranging pole / look along string or rope (1)
Read / measure/record angle (1)
Move poles up beach /along profile to next site/break of slope (1)

(1 + 1 + 1 + 1) = 4 [4]

(ii) Examples of evidence:
Average wave frequency is 7.6 / less than 13 /between 6–10/less than destructive wave (1)
Beach profile is more similar to constructive beach profile (1)
Small bars near sea/0–15m (1)
Build up of ridge (berm)/at 30m (1)
Small bars rather than large bars (1)
Ridge rather than steep beach (1)
Flattens off at back/after ridge/ from 30–40m (1)

(1 + 1 + 1) = 3 [3]

(e) (i) Examples
Wind sock / streamer / material held up / throw grass into the air / wet finger /observe features blown by wind (1)
Use compass to see direction wind is blowing (1)

(1 + 1) = 2 [2]

(ii) Completion of graph:
0m @ 6.5cm length, 240m @ 4.2cm length

(1 + 1) = 2 [2]

(iii) Yes / results support hypothesis /hypothesis is True

Examples of evidence
Average pebble **size** decreases from west to east/further east along beach (1)
Overall decrease from 6.5cm length at 0 to 4.0cm length OR other appropriate paired data (1)
0–100m all 6cm or more; 100–260m all 5.9 or less (1)

Anomalies at 20/ 80 /160 m where pebble size is larger (1 mark max)

Credit paired data (distance and pebble size) to 1 mark max

(1HA + 1 + 1) = 3 [3]

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(iv) Examples
Paint 50 pebbles (1)
Group/put them in the swash / backwash zone / west side of beach/at water's edge (1)
Mark starting point (1)
Leave them for period of time (1)
Find the pebbles & measure distance from starting point (1)
OR
Lay out tape measure close to water / mark start and finish points (1)
Put float/coloured balls in water at start point (1)
Time how long it takes object to reach finish point (1)
Repeat a number of times and take average (1)
OR
Measure from top of groyne to beach surface (1)
On both sides of groyne (1)
Measure at equal distances along groyne (1)
Calculate average distance from top to beach on both sides of groyne (1)
Repeat for other groynes to confirm movement along beach (1)

(1 + 1 + 1 + 1) = 4 [4]

(f) Examples
Weathering/physical/chemical weathering of rock forming cliffs (1)
Freeze-thaw could crack rocks (1)
Rock falls (1)
Undercutting/erosion of cliff (1)
Collapse of unsupported rock (1)
Strong waves carry rocks to cliff (1)
Backwash too weak to move them (1)

Can be three separate ideas or one of above developed to 2 or 3 marks

(1 + 1 + 1) = 3 [3]

[Total: 30 marks]

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