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CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2012 series

0460 GEOGRAPHY

0460/43 Paper 4 (Alternative to Coursework), maximum raw mark 60

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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1 (a) (i) Clear of buildings / away from shelter / open ground
Clear of trees / away from interception
Clear of people or animals / away from interference
On grass not concrete / non-splash surface
On flat land 2 @ 1 [2]

(ii) Container stood firmly in ground / above ground / on ground
Rainfall / water collects in measuring cylinder / rains into cylinder
Read water level in measuring cylinder / read at eye level / read off the scale / read off the gauge
Reading taken at same time every day / specific time period
Empty water out of container
Add any water collected in overflow cylinder [3]

(iii) On the top of a building
Away from obstruction / exposed to wind 2 @ 1 [2]

(iv) Arrow turns / spins in the wind
The arrow points the direction the wind is coming from
The letters show direction / reference to compass direction [3]

(b) (i) 4.8 (mm) [1]

(ii) Primary data: using a barometer & measuring the speed of river flow
Secondary data: researching on the internet & reading a newspaper report
4 correct = 2 marks, 2 or 3 correct = 1 mark, 1 correct = 0 [2]

(iii) Measurements made at same time of day
No measurements are missing / all the days / everyday
Measurements done with accurate or advanced instruments / recorded automatically or by computer
Experienced or professional people / student error
Answer could focus on weaknesses of student measuring 2 @ 1 [2]

(iv) Plot 2mm at coastguard station at day 2 [1]

(v) Average rainfall is higher at coastguard station / lower at school

Paired data for 2 marks
e.g. average daily rainfall 4.8 mm at school, 6.1 mm at coastguard station
e.g. days with 8 mm rainfall or more (2/10 at school, 6/16 at coastguard station)
e.g. up to 15 mm on one day at CG station, up to 12 mm in one day at school
No Hypothesis mark [3]

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(c) (i) Plot wind bars: SW = 4 [1]

(ii) Plot rainfall bar: 1 mark for scales (up to 5mm & 15th);
1 mark for bar = 4 mm;
1 mark for position in SE quadrant [3]

(iii) School: Hypothesis is not true / incorrect – 1 mark reserve
More rain on days when wind is from N/NW
If answer is Hypothesis is true / partially true = 0
Rainfall is more than 5mm when wind is from N/NW & rainfall is 5mm or below when wind is from S/SW
There is more total rainfall when the wind is from N/NW (26 mm) than when the wind is from S/SW (20 mm)

Coastguard station: hypothesis is true / correct /more rain on days when wind is from S/SW – 1 mark reserve
If answer is Hypothesis is not true / partially true = 0
Rainfall is more than 5mm when wind is from S/SW & rainfall is 5mm or below when wind is from N/NW / NE / SE
There is more total rainfall when the wind is from S/SW (76 mm) than when the wind is from N/NW /NE / SE (22 mm)

1 mark for each hypothesis; 2 marks for supporting evidence [4]

(d) Direction of wind varies from day to day
More rain when winds blow from the sea
More winds from sea / south affect coastguard station
School is sheltered from winds off the sea or from south by hills / rainshadow

School gets more rain when winds are from north
Coastguard station is sheltered from north winds by hills / rainshadow

1 mark maximum for comparative location such as:
CG station is nearer sea or CG station on coast & school inland
CG station is at sea level & school is 200m above SL or school is higher [3]

[Total: 30]

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2 (a) (i) Look at what was for sale in the shops
Language of shop signs / products
Customers' language
Ask / survey / questionnaire shop owners
Ask / survey / questionnaire customers
Appearance e.g. dress 3 @ 1 [3]

(ii) To test methodology / find out if any problems / check sample size
Opportunity to change methodology / make improvements
Gain confidence in doing fieldwork / practice / gain experience 2 @ 1 [2]

(iii) Draw divided bar to show nine tourist & six local shops
1 mark for dividing line, 1 mark for shading

If numbers are 'wrong way round' credit correct shading [2]

(iv) $\frac{3}{11} \times 100 = 27.3\%$ (27.27)
1 mark for calculation, 1 mark for answer
No need for percentage [2]

(v) Rank order: site 6 = rank 2
site 7 = rank 4
site 8 = rank 5
site 9 = rank 3
site 10 = rank 11

(b) (i) Total environmental score = 14 [1]

(ii) Subjective / biased judgements /Surveys done by different people get different results
Survey will be done at different times / different days 2 @ 1

(iii) Plot sites 4 (tourist shops = 50%, environmental score = 16)
and 7 (tourist shops = 66.7%, environmental score = 23) on scatter graph 2 @ 1 [2]

(iv) Plot best fit line on scatter graph (curved or straight)
Positive with 3 plots clear of line on each side [1]

(v) Graph shows a positive correlation / relationship between percentage of tourist shops and environmental score
As percentage of tourist shops increases so does environmental score
No Hypothesis mark [1]

(vi) Environment of an area is improved to attract more tourists / to maintain level of tourism or examples of how area is kept clean
Poor environment will put off tourists / prevent them coming
Tourist industry income can be used to improve environment [2]

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(c) (i) Methodology such as: one person every two minutes / every tenth person / male – female – male / ask people at equal intervals [1]

(ii) Complete pie graph – division and shading for 1 mark [1]

(iii) Complete tally chart – all correct = 2 marks
3 or 4 correct = 1 mark [2]

(iv) Hypothesis is true / correct / partially true / tourism does have a positive economic effect – 1 mark reserve
If answer Hypothesis is not true = 0
At 8/10 / most / majority sites more than 50% / most / majority answered Yes (to question 2)
Exceptions are sites 1 & 2
At two sites / at site 6 / at site 10 all residents answered Yes (to question 2)

Credit effects from Fig. 12 with supporting data (number or site) to 1 mark maximum
e.g. Most sites have more than 5 tallies for job opportunities
At site 10 15/20 said more job opportunities [4]

(d) Less unemployment
Jobs such as guides, vendors, hotel staff, security staff / job opportunities in hotels, shops
Jobs are reliable & give local people more income / earn money
Can buy necessities / luxuries or examples
Can pay for education / health care / electricity / water supply / electricity [3]

[Total: 30]

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