

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

MARK SCHEME for the May/June 2010 question paper
for the guidance of teachers

0460 GEOGRAPHY

0460/41 Paper 41 (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.

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- 1 (a) Consult tide tables/work at low tide/watch out for waves and currents
 Watch out for slippery rocks/uneven groyne
 Avoid working near foot of crumbling cliffs/wear hard hat
 Wear protective clothing/clothing that is easily visible
 Wear shoes to protect against sharp objects
 Use sunblock
 Take a mobile in case of emergency/to call for assistance
 Stay in group/pairs
- NOT: work under teacher supervision/don't go into sea
- 2 @ 1 [2]
- (b) (i) 1 mark for each arrow linking pebble positions, i.e.
 direction of swash
 direction of backwash
 1 mark max. if no arrow heads [2]
- (ii) Left box: Direction of prevailing wind
 Right box: Direction of longshore drift
 Both correct for 1 mark [1]
- (iii) Wind drives waves/wave move in direction of wind
 Waves come to the beach at an angle/oblique
 Swash carries material up the beach
 Backwash takes material back down the beach
 Process is repeated with each wave
- No credit for swash/backwash by themselves [3]
- (c) (i) Make them easy to see
 See how far or in what direction the pebbles had moved [1]
- (ii) 1 mark for plotting and shading bar graph: 8
 Ignore shading
 1 mark for accurate pebble size: 4cm (4 squares) [2]
- (iii) Longshore drift moves pebbles along the beach (NOT down beach)
 Most pebbles/specific number of pebbles moved between 20–40 metres
 Accept any two groups between 10–50 m
 Smaller pebbles moved further than larger pebbles
 Mode is 20–30 m [3]
- (d) (i) 1.5 (m) [1]
- (ii) 1 mark for each bar
 5 m = 1.2; 10 m = 1.5
 1 mark max. if lines drawn on bars [2]

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- (iii) Hypothesis is correct/groynes do reduce movement of material – reserve
 North side of groyne has bigger build up of material
 Distance from top of groyne to beach material is less on north side
 Groyne has less influence towards sea/more than 25–30 m away from point X
 Credit comparative data for N & S of groyne to 1 mark max. (not reserve)
 e.g. average measurement from top of groyne to beach = 1.1 to north,
 1.5 to south of groyne.

No credit for explanation, e.g. trapping material

1 + 2

[3]

- (e) (i) Establish eye level height on each pole and mark it with a piece of visible tape/top of pole
 Use tape measure to measure 10 m/distance between poles
 Put the two ranging poles at 10 m intervals across beach
 Hold the clinometer at arm's length and sight the visible marker
 Read the angle of deviation from the horizontal/measure the angle with the clinometer
 Record the angle on a recording sheet
 Repeat every 10 m along/up/down/across beach
 Take measurements on north and south sides of groyne

[4]

- (ii) Steeper profile on the north side of the groyne
 More uneven profile on the north side of the groyne
 North side of groyne is higher
 Answer must be comparative

NOT more material on north side of groyne

2 @ 1

[2]

- (iii) Hypothesis is true/groynes did/do affect the beach profile
 Accept 'Yes' + hypothesis

NOT 'Yes' by itself

[1]

- (f) Do more profile measurements either side of the groyne/every 5 m
 Do more profile measurements at different sites along beach/at other groynes on this beach/at sites where there are no groynes on this beach
 NOT on other beaches
 Test if the results would be the same at different times of the year/days/conditions
 Check accuracy of measurements for angle of profile/distance between ranging poles/from top of groyne to beach (What)
 Check accuracy of measurements by doing more often and calculating average/more people involved/same people do all measurements (How)
 1 'fallback' mark for check accuracy of measuring/check if measuring done correctly – if no other detail

NOT check pebbles data

[3]

[Total: 30]

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- 2 (a) Road junction/cross-roads
Peak land value point
Historic building or site e.g. church or square
Town hall
Indoor shopping centre/mall
- NOT: highest buildings/most shops/most businesses/most pedestrians/bus station/outdoor market/car park
- 3 @ 1 [3]
- (b) (i) Total = 17 [1]
- (ii) Advantage:
Can be measured accurately on a map
Systematic coverage of CBD area – points at 100, 200, 300 m
Covers all directions
Well distributed (NOT wide area)
- Disadvantage:
Difficult to measure accurately on a road
Site may be inappropriate to use for survey
Distances between sites are too large so few survey sites
Gaps between four roads are not covered by survey
- No credit for opposites
- 1 + 1 [2]
- (iii) To see if there is any variation during the day
To include factors which affect specific times e.g. going to work/lunch time
- NOT: wider variety of results/average results/accurate results
- 2 @ 1 [2]
- (c) (i) Shading of area with more than 150 pedestrians – needs shading in all 4 quadrants (NOT line shading) [1]
- (ii) Isoline plotted on Fig. 12
Subtract 1 mark for each error [2]
- (iii) Information does support the hypothesis/numbers decrease – reserve
But the rate of decrease varies in different directions
All totals decrease away from CBD
Use of comparative figures from Fig. 8 to support conclusion [2]
- (iv) High number/lot of pedestrians/numbers increase near car park
High number/lot of pedestrians/numbers increase near bus station
High number/lot of pedestrians/numbers increase near shopping centre
High number/lot of pedestrians numbers increase near town hall
No important buildings on Bluebell St so less pedestrians
- Do not accept: less shops/more shops [2]

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- (v) Increase in number/more pedestrians generally at car park/at bus station/at shopping centre
 Increase in number/more pedestrians along Albion St/near market
 Increase in number/more pedestrians particularly during 08.00, 10.30 and 13.00 coffee times
 between 08.00 and 13.00/when market is open

NOT 'lot of people'

[3]

- (d) (i) 1 mark for name of sampling method

2 marks for describing method:

Stratified

Appropriate gender balance

Appropriate age balance

Systematic

Use a system of sampling

Asking every tenth person

Random

No pattern to sampling

Random number tables

[3]

- (ii) Attractions:

Accessible by bus/train/public transport

Car parking space

Indoor shopping

High level of security/safe

Facilities – toilets/play area/disabled provision

Pleasant environment – landscaping/displays

Pedestrianised

Everything within walking distance

Entertainment/cinema/theatre/museum/coffee shops

Place to meet friends

NOT: shops/services/cheaper prices/jobs/clean area

Concerns:

Difficulty of parking/narrow roads

Begging/harassment

Lack of facilities – toilets/rest areas

Too many down-market shops affect the image/lots of empty shops

Groups of youths/crime/violence/drugs/insecure

Dangers from traffic in busy area/congestion

Air pollution/noise/dangerous needs qualifying

No credit for opposites

2 + 2

[4]

[Total: 25]

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(e) Graphs:

Need type of graph + purpose for each mark, such as:

- pie chart of attractions
- pie chart of concerns
- divided bar graph of concerns
- bar chart of age groups
- pie chart of attractions for females
- pie chart of attractions for males
- bar chart of opinions (attractions + concerns)

Analysis:

Rank results

Pick out the top three/top one/what attracts or concerns most

Identify differences in results between genders

Identify differences in results between age groups

Look for patterns/comparisons (e.g. between male and female)

Compare results with secondary data

Recommendations:

What people like

What concerned people

Reserve 1 mark for each of the three sub-sections

No transfer of marks between headings (mark under headings)

[5]

[Total: 30]