

**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.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

- CIE will not enter into discussions or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the May/June 2010 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

Page 2	Mark Scheme: Teachers' version	Syllabus
	IGCSE – May/June 2010	0460

- 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]

Page 3	Mark Scheme: Teachers' version	Syllabus
	IGCSE – May/June 2010	0460

- (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]

Page 4	Mark Scheme: Teachers' version	Syllabus
	IGCSE – May/June 2010	0460

- 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]

Page 5	Mark Scheme: Teachers' version	Syllabus
	IGCSE – May/June 2010	0460

- (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]

Page 6	Mark Scheme: Teachers' version	Syllabus	
	IGCSE – May/June 2010	0460	

- (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]