

**CAMBRIDGE INTERNATIONAL EXAMINATIONS**

Cambridge International General Certificate of Secondary Education

**MARK SCHEME for the October/November 2015 series**

**0460 GEOGRAPHY**

**0460/43**

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

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1 (a) (i) C [1]

(ii) Clinometer, ranging poles  
If more than two answers – 1 for each incorrect answer 2 @ 1 [2]

(iii) Lay tape measure out along transect line  
Put poles at break of slope / at equal or set distances apart / 5 m or more apart  
Measure / mark distance between ranging poles  
Poles must be vertical  
Sight other ranging pole at top / agreed height / line up  
Read / measure / record angle – need reference to **clinometer**  
Move poles across/ along profile / transect / to next site / repeat measurement **along** transect [4]

(iv)

Description	Type of dune
Oldest dunes which are furthest inland	Grey (dune)
Most recently created dunes	Embryo (dune)
Tallest dunes	Yellow (dune)

[1]

(v) Obstacle / plant on / behind the beach  
Wind picks up sand / blows sand / carries sand / moves sand  
Friction with obstacle/plant slows down wind  
Sand is deposited around obstacle / traps sand  
This increases size of obstacle so deposition continues and dune grows  
Plant roots hold dune together [3]

(b) (i) Put quadrat / grid on ground / alongside tape / put quadrat down  
Estimate percentage of quadrat / count number of squares which include vegetation cover  
Do more than one measurement **and** calculate the average  
Record results / write down measurements [3]

(ii) Plot 60% cover at 190 m, 75% cover at 210 m 2 @ 1 [2]

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- (iii) Hypothesis is **correct** / true / generally / mostly / partially correct – 1 mark reserve  
 e.g. Percentage of cover increases from 20% at 10 m / site 1 to 95% at 290 m / site 15 – **need 2 percentages and 2 distances or site numbers**  
 Exception / anomaly to the pattern at: 30 and 50, 110 and 130, 150 and 170, 210 and 230, 290 and 310 m (or sites)  
 e.g. percentage of cover is 30% at 30 m / site 2 and 25% at 50 m / site 3 – **need 2 percentages and 2 distances or site numbers**  
 OR: % is **higher** at 30 m or site 2 than at 50 m or site 3 / **lower** at 50 m or site 3 than at 30 m or site 2  
 Need 1 supporting set of statistics and 1 anomaly set of statistics [3]
- (c) (i) Photograph / take sample / sketch / written description of vegetation  
 Look up in book / internet / vegetation chart  
 Ask ranger / teacher / expert 2 @ 1 [2]
- (ii) May be other different types of vegetation / will not see variety or diversity  
 Main type of vegetation may only just be over 50% [1]
- (iii) Credit any two changes from Table 1. Need 2 vegetation types and distance or description of position  
 Accept distance or site number.  
 e.g. Sea couch grass at 10 m / site 1 and lyme grass at 30 m / site 2  
 e.g. Sea couch grass and lyme grass occupy area closest to sea and marram grass occupies large area behind it  
 e.g. 1. Sea couch grass 0–30 m away  
 2 Gorse / heather 270 m away from sea = 1 mark
- No Hypothesis mark 2 @ 1 [2]

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(d) (i) Tourists walking / trampling / cycling / having a picnic / dropping litter / starting a fire / pulling up plants / driving on dunes  
Kill / damage / destroy vegetation / vegetation dies / vegetation cover decreases / ruins vegetation [2]

(ii) Notice boards / visitor centre / signs / notices / leaflets to educate / inform / tell tourists  
Marked / signed footpaths / build or make a footpath  
Boardwalk across area  
Fence off / rope off areas / restricted access  
Barriers to prevent vehicle / cycle access / create car park  
Rangers to monitor / advise tourists  
Charge admission to dunes  
Designate picnic sites / ban barbecues or picnics  
Litter bins [4]

**Total 30 marks**

2 (a) (i) Central Business District [1]

(ii) Factory [1]

(b) (i) Ideas such as:  
Choose a variety of people / choose people of different age or gender  
Don't just ask people you know  
Introduce yourself / explain purpose of survey  
Have a system for choosing people such as every 10th person / random / have a sampling method  
Accept if people don't want to answer or fill it in / don't argue / be polite / thank them  
Don't approach people in a big group / work in pairs / don't work alone  
Don't block pavement / doorway  
Go to different parts (of the CBD) / don't all go to the same area [3]

(ii) 15–30 (or reasonable alternative between 30–40)  
31 (or reasonable alternative) – 60  
Accept reasonable ranges if not overlapping 2 @ 1 [2]

(iii) Divided bar graph completion  
1 mark for dividing lines at 71 and 91  
1 mark for shading [2]

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(iv)

Opinion	Number of answers	Weighting	Score
Agree strongly	31	+2	+62
Agree	40	+1	+40
Disagree	20	-1	-20
Disagree strongly	9	-2	-18
Total score			+64

1 mark for 4 correct scores

1 mark for correct total = 64

Must have the + and – symbols

[2]

(v) Answer from **b(iv)** plotted accurately (ecf)

[1]

(vi) Hypothesis is **correct** / true / mostly true – 1 mark reserve (✓HA)

Table 2 / Fig. 7

Over half agreed with 3 of the 4 statements

Majority agreed that shop has brought more goods and services / attracts people to town more often / has provided more jobs

Less than half agreed / more than half or most disagreed that shop has increased competition

Credit data if added together or paired for 1 mark max

e.g. 64 agree that the store has brought more services (accept statement 1)

e.g. 31 strongly agree and 40 agree / 71 agree that shop attracts people to the town centre (accept statement 2)

Fig. 8

All statements have positive scores

People are most positive about jobs created

People are least positive about competition to other shops

Credit data for 1 mark max

e.g. score / index for brought goods and services = 63 /

shops attract people = 64 / provides jobs = 140 (accept reference to statements 1, 2, 3, 4)

average score for all 4 statements is 68.75

[4]

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**(c) (i) Scores may vary between students:**

Carry out pilot study  
 Work in groups **and** discuss / agree / check score  
 Calculate the **average** score from a group of students

NOT: compare score with other groups

**Score may vary at different times:**

Make sure surveys are done at same time / agree a time for survey [2]

(ii) Bar drawn to 22 [1]

(iii) **Disagree** with conclusion / students' decision / hypothesis is **false** – 1 mark  
 reserve (✓HA)

New town has a **positive** impact (on the environment)

Higher EQ results or score / positive descriptions / scores over 21 **are**  
 nearest to new shop / sites C or D

Lower EQ results or score / negative descriptions / scores below 21  
**are** furthest from new shop / sites B or E

Credit contrasting paired data of **total** scores for 1 mark maximum  
 e.g. C scores 27 and E scores 17, D scores 30 and B scores 14,

Points C/D are nearer the new shop and have higher scores than points B/E which are  
 further away = 2 marks

If no decision credit evidence [4]

**(d) (i) Recording sheet should include:**

Street name / location / sample point / site / survey point  
 Number of pedestrians / tally label / example of tallying method (NOT blank space)  
 Total number  
 Time / day / date [3]

(ii) 2 or 3 students / group go to each survey point

All start the count at the same time / synchronise watches

All count for the same length of time / finish at the same time / 30 mins

Do more than one count in a day / do it on several days or on two different days / do one  
 count in the morning and one in the afternoon

Note down / record / count people passing the point / one person counts and one person  
 writes down

Fill in the recording sheet / fill in the tally / use a clicker [4]

**[Total 30 marks]**