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Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

GEOGRAPHY **0460/23**

Paper 2 **May/June 2016**

MARK SCHEME

Maximum Mark: 60

Published

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1 **(a)** **(i)** triangulation pillar, [1]

(ii) mast, [1]

(iii) youth hostel, [1]

(iv) Leam Hall, [1]

(v) non–coniferous (wood), [1]

(vi) primary route, [1]

(b) **(i)** road at 33 to 36mm from the western edge of the section, [1]

(ii) boundary at 90 to 93mm, [1]

(iii) river at 26 to 29 mm,

Use the ruler device to measure the answers.
Arrows should end within about 1cm of the profile.
Measure to the point the arrow projects to.
There should be no ambiguity.
If there is more than one response and one is wrong, or if a range is given and part is out of tolerance, then the answer = 0.
Allow labels by names or question numbers. [1]

(c) hall/(selected) place of tourist interest,
museum,
parking,
youth hostel,
telephone, [2]

(d) tunnel,
cutting, [2]

(e) **(i)** allow 3700 to 3800, [1]

(ii) allow 173° to 176°, [1]

(iii) 180755 / 6, [1]

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(f) hilly/high/upland,
steep,
cliff,
plateau/high(est) land/centre/1973 gently sloping/flat,
(highest point) 395m,
valley(s)
spur(s),
ridge,

river in W / SW / 1772,
small river/stream/tributary,
low drainage density/little (surface) drainage/dry/only one river,
meander,

Reserve one mark for each part. [4]

2 **(a)** narrow/small leaves,
thorns/spikes,
few leaves/more wood than leaf,
branch from base,

prevent browsing/being eaten (to conserve water),
reduce transpiration,
shade root area/reduce evaporation from the soil, [4]

(b) **(i)** sand is loose/unstable/poor soil structure/soil moves,
roots become exposed/plant is not anchored,
sand can bury plants,
sand does not retain water/dry (allow various expressions),
sand lacks nutrients/infertile, [2]

(ii) sparse/scattered/bare ground,
trees,
bushes/scrub/shrubs/grass,
various sizes, [2]

3 **(a)** east/south east/north east, [1]

(b) low population density/fewer than 100 per km²,
city/Karachi high density/1000 people or more per km²,
low land/less than 300m, [3]

(c) low(er) population densities on high(er) land/high(er) population densities on low(er) land/the higher the land the lower the population density/negative relationship, = 1
Award a second mark for the correct use of one figure using the following:.
for low density accept less than 100 per km²
for high density allow any figure over 250 per km²
for low land accept any figure less than 3000m
for high land accept 3000m and over = 1 [2]

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(d) Quetta
(quite) high population on (quite) high land/1000–2999m,
high population in an area of low population,
high population in the west,

Region X
low population on low land/below 300m,
low population in an area of high population,
low population in the east, [2]

4 **(a)** **(i)** Espanola and San Cristobal (both needed), [1]

(ii) in the south east/east, [1]

(iii) >1/5/multiple/more cones/volcanoes,
bigger than the other islands,
more irregularly shaped/not circular/oval,

Comparison not needed. [2]

(b) **(i)** 1 = San Cristobal,
3 = Santiago/Fernandina, [2]

(ii) north west to south east, [1]

(iii) it is far from the rising magma/not over the rising magma/far from plate boundary/moved away from plate boundary, [1]

5 **(a)** smaller segment 107°–111°,
both segments correctly shaded, [2]

(b) **(i)** crew/guides for excursions from the ship/restaurant staff/waiters/cabin stewards, etc. [1]

(ii) retail/museum staff/café/restaurant staff/taxi drivers/coach drivers/hotel staff/diving schools/kayaking organisers,
etc. [1]

(c) **(i)** litter,
noise,
animals may not reproduce,
destruction of habitats,
oil spills from boats pollute water,
trampling can harm vegetation/cause soil erosion,
construction causes damage to vegetation,
distortion of culture,
etc. [2]

(ii) small groups/limit numbers,
conservation areas/restricted/prohibited access areas,

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local people are employed whenever possible,
local produce used in catering,
hotel waste water managed using natural purification method,
solar panels generate electricity for hotels,
biodegradable shampoos/soaps/detergents used,
wooden boardwalks prevent soil erosion,
hotels/lodges made from local building materials,
education,
laws/rules specified,
signage specified,
stop hunting,
rangers,
etc. [2]

6 (a) (i) steep,
soil erosion,
thin/rocky soils,
cannot use machinery,
vegetation needs removing,
inaccessible/no roads,
rapid runoff (therefore soil dry), [2]

(ii) <u>either:</u>
grass strips/terraces/contour ploughing,
soil erosion,

<u>or:</u>
fallow/left uncultivated,
soil exhaustion, [2]

(b) (i) shortage of rainfall, [1]

(ii) rotates/moves around fixed end,
sprinkles water from holes/irrigates, [2]

(iii) green circles/crop growth in circles/circular fields, [1]

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