**CAMBRIDGE INTERNATIONAL EXAMINATIONS**

**International General Certificate of Secondary Education**

# MARK SCHEME for the May/June 2013 series

## 0460 GEOGRAPHY

**0460/22** Paper 2, 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)** 10m

**(ii)** 1 $km^2$
more than one answer = 0

**(b) (i)** A/Main A/A3

**(ii)** embankment

**(iii)** cultivation/plantation [1]

**(iv)** marsh/swamp [1]

**(v)** water tank [1]

**(vi)** bridge [1]

**(vii)** district (boundary) [1]
more than one answer = 0

**(c)**

| | Pte Moyenne (8495) | La Mecque (8694) | Both these areas | Neither of these areas |
|---|---|---|---|---|
| coral | ✓ | | | |
| a river or watercourse | | | ✓ | |
| a populated area | | ✓ | | |
| forest | | | | ✓ |
| gentle slopes | | | ✓ | |

more than one tick per row = 0

**(d)** hilly/hill/high/mountain/upland (don't extract from place name)
steep
cliffs (steep cliffs = 1)
any height between 400m and 630m (allow 446m as highest point)
ridge/spur
col/saddle/pass
concave slope
V-shaped valley
flatter/gentle <u>in south/in 8991/9091/9191/at poultry farm/at sugar plantation</u>
(As alternative to this line allow "steeper in the north".) [3]

**(e) (i)** 2500 – 2650 (metres) [1]

**(ii)** N/NNE/NE [1]

**(f)** 1 in 2/1 in 2.3/1 in 2.33
1:2/1:2.3/1:2.33
50%/43%/42.9%/42.85%

Don't allow other expression e.g. "2.3"

**2 (a) (i)** 8 middle order settlements plotted
ignore position, width and shading of bar

**(ii)** 40
more than 1 tick = 0 [1]

**(b) (i)** sphere of influence to include the nearby village but not touch any of the other towns
(ignore other villages and other sphere of influence) [1]

**(ii)** other nearby settlements/village/town (but not city) to provide services
low order services/few services/no high(er) order services
services have small range/people won't travel far for services
poor transport links

allow "goods" or "functions" for "services" [1]

**(c) (i)** frequent use/everyday needs
no need to travel far/they are close/less than 1km/little travel time/cost [1]

**(ii)** population is small/small settlement/not enough customers
these services have a large(r) threshold population/high(er) order services/
middle order services [1]

**(iii)** furniture store
airport [1]

**(iv)** easier transport to Z/poorer transport to A
better quality at Z/poorer quality at A
more choice/larger store at Z/poorer choice/smaller store at A
cheaper prices at Z/more expensive prices at A
other services available at Z
better reputation at Z/poorer reputation at A

doesn't need to be comparative – could be solely on X or A
accept best point [1]

**3 (a)** Erosion: waterfall
notch/V cut by stream/path cut by stream (a
plunge pool
undercut
stepped profile (allow terraced)
valley at top of photo
exposed rocks/lack of soil/lack of vegetation

Weathering: harder layers stand out/bedding planes ope
vegetation growing in cracks/in rocks/on cliff
vegetation shows biological/chemical weathering
<u>fallen/disturbed/loose</u> blocks/boulders/rocks/stones/slabs/layers

reserve one mark for each section
no transfer between sections [4]

**(b) (i)** boulders/large rocks/large stones
different sizes/large and small
rounded/smooth
red/orange/colour variation/coloured altered (but not black)
joints/cracks
layers peel/onion skin effect

don't allow points clearly linked to erosion [3]

**(iii)** exfoliation
freeze-thaw/frost shattering

any chemical process spoils the answer [1]

**4 (a) (i)** there are active volcanoes in Africa, Asia, Europe, North America and South America [1]

**(ii)** there are active volcanoes close to most coastlines of the Pacific Ocean [1]

**(iii)** most active volcanoes are close to plate boundaries [1]

**(b)** Laki: plates diverge/constructive margin
hotspot/hot area within mantle
melting/rising magma/magma escapes

All others: plates converge/destructive margin
subduction (allow if it is the wrong plate)
melting/rising magma/magma escapes

If volcano chosen not from Fig. 6 MAX 1 – don't allow the first point [2]

**(c)** eruption of Tambora/Laki/volcano 1/volcano 3/Iceland/In
produced ash cloud
blocked sun/solar radiation
cooling/prevented heading of Earth/atmosphere/land (not
worldwide/affected large area
long term/affected whole area

**5 (a)** Iron ore mines: in south
in east/north-east/near Bay of Bengal

Coal mines: in centre/inland
in east/north-east/near Bay of Bengal

Allow "near Jamshedpur/steel works" once for either section
reserve one mark for each section [3]

**(b) (i)** iron ore from East Singhbhum/Sundargarh/Keonjhar/Durg/1/2/3/4
coal from Jhana/Raniganj/Bokara/Talcher/Bisrampur/Korba 1/2/3/4/5/6
iron ore and coal nearby/within 250km/in north east of country/
surrounded by iron and coal mines [2]

**(ii)** lake/river/Subamarekha River/Kharkai River [1]

**(iii)** railway/train [1]

**(iv)** vehicles/earth moving equipment/metal sheets/cables/pipes/
wire industries 1–5
other industries/local industries [1]

**6 (a)** large sector 100 – 102° = 2 (independent of key)
large sector 98 – 104° = 1 (independent of key)
correct use of key = 1 [3]

**(b)** strong winds [1]

**(c)** correct option and explanation required in each case
only one correct option in **(i)**, **(ii)** and **(iii)** but either option possible in **(iv)**
reference to wind action = 0
answer could be by giving a positive reason for the choice or by stating why the alternative was rejected

**(i)** Leave strips of vegetation between the plots

vegetation will intercept/trap/absorb/protect from rain/water
vegetation will prevent water from flowing/runoff
vegetation will trap/bind/hold/stabilise/keep soil together [1]

**(ii)** Plough horizontally across the slope of the hillside

prevent water from flowing/prevent runoff/allow water to s

**(iii)** Grow a different crop on each plot for the first three years

retain/replace soil nutrients/minerals
different crops use minerals
maintain soil structure/humus/organic content

(**iv)** Fence the land and keep animals away

will prevent animals grazing until soil is bare/prevent overgrazing
prevent removal of protective vegetation
animals trample/hooves/movement/damage roots
old crop will maintain soil structure/minerals/humus/organic content [1]

**(v)** Allow cattle to graze on the remains of the crop after harvest

dung will maintain the soil structure/humus/organic content
dung will replace minerals/nutrients

(for “soil structure” allow phrases like “keeps soil together”) [1]