## GEOGRAPHY

0460/23
Paper 2
MARK SCHEME
Maximum Mark: 60

## Published

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.

Cambridge International will not enter into discussions about these mark schemes.
Cambridge International is publishing the mark schemes for the October/November 2019 series for most Cambridge IGCSE ${ }^{\text {TM }}$, Cambridge International A and AS Level components and some Cambridge O Level components.

## Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

## GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:
the specific content of the mark scheme or the generic level descriptors for the question the specific skills defined in the mark scheme or in the generic level descriptors for the question the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:
Marks awarded are always whole marks (not half marks, or other fractions).
GENERIC MARKING PRINCIPLE 3:
Marks must be awarded positively:
marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
marks are awarded when candidates clearly demonstrate what they know and can do marks are not deducted for errors marks are not deducted for omissions answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:
Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

## GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:
Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

| Question | Answer | Marks |
| :---: | :---: | :---: |
| 1(a)(i) | turning place, | 1 |
| 1(a)(ii) | other/open (land), | 1 |
| 1(a)(iii) | deciduous forest, | 1 |
| 1(a)(iv) | 25 m , | 1 |
| 1(a)(v) | (municipality) boundary, | 1 |
| 1(b)(i) | 5-7, | 1 |
| 1(b)(ii) | radial/route centre/nodal point/focus on town/branch out from town, | 1 |
| 1(c)(i) | 2000-2200, | 1 |
| 1(c)(ii) | SSE/SE, | 1 |
| 1(d) | at least 6 m wide, <br> flows east, <br> braided/island/splits and re-joins, meanders, <br> cut-off/oxbow, (4025) <br> straightened, (3826) <br> gentle gradient, <br> two/few/small tributary/ies, dam, | 4 |
| 1(e)(i) | in valley(s) <br> near river(s), <br> on low(er) land/land below 25 m (any figure below)/avoids high(er) land, on gentle(r) slopes/on flat(ter)/avoids steep(er) slopes, | 2 |
| 1(e)(ii) | steep(er) slopes, <br> high(er) land/hills/any figure between $25 \underline{\mathrm{~m}}$ and $74 \underline{\mathrm{~m}}$, (more) in the west/south/less in the east/north, | 1 |
| 1(f)(i) | marsh (liable to flooding), | 1 |
| 1(f)(ii) | nature reserve, | 1 |
| 1(g)(i) | railway/R 76-80 mm from the western edge, | 1 |
| 1(g)(ii) | river Kälan/K 24-27 mm from the western edge, | 1 |


| Question | Answer | Marks |
| :---: | :--- | ---: |
| 2(a)(i) | $40-99.9$, | $\mathbf{1}$ |
| 2(a)(ii) | centre, | $\mathbf{1}$ |
| 2(a)(iii) | desert/dry/rainfall shortage, hot, mountains/highland, (2 marks maximum) <br> steep slopes in east/mountains, <br> cold on mountains, <br> wet on mountains, <br> little/less oxygen at high altitude, <br> danger from active volcano, <br> high evaporation rates, <br> agriculture difficult in mountains/desert, <br> transport/building difficult in mountains, | $\mathbf{2}$ |
| 2(a)(iv) | cold temperatures, <br> therefore farming is impossible/difficult, <br> remote/isolated/far away, <br> many islands so difficult transport/accessibility, | $\mathbf{1}$ |
| 2(b) | central so as close to rest of country as possible/accessible from other regions, <br> connects north and south, <br> near the (regions with the) highest population densities, | ( |


| Question | Answer | Marks |
| :---: | :--- | ---: |
| 3(a)(i) | shingle/pebbles/gravel/stones/different coloured stones/small rocks/cobbles, | $\mathbf{1}$ |
| 3(a)(ii) | beach material has built up on one side of it, <br> the extent the sea reaches up the beach differs on one side of the groyne from <br> the other, | $\mathbf{1}$ |
| 3(b)(i) | F - gabion/boulders in wire cases, <br> G - rip-rap/boulder barrier/rock armour/pile of boulders/large rocks, | $\mathbf{2}$ |
| 3(b)(ii) | absorbs/dissipates/reduces wave energy/power, <br> prevents coastal erosion/prevents waves attacking (foot of) cliff/coast, | $\mathbf{2}$ |
| 3(b)(iii) | expensive/not cost effective, <br> coast not worth protecting, <br> ugly, <br> dangerous/prevents access to the beach/makes access to the beach difficult, <br> impact further along the coast, <br> loss of beach area/habitats, | $\mathbf{2}$ |


| Question | Answer | Marks |
| :---: | :--- | ---: |
| 4(a) | Fig. 4.1 <br> globular/cauliflower shaped/dome shaped/curved/irregular top/cotton wool, <br> (allow fluffy or puffy) <br> flat base, <br> white/light/pale/grey, <br> cumulus, <br> Fig. 4.2 <br> layer/sheet, (allow blanket) <br> horizontal, (allow flat) <br> uniform, <br> grey/bluey-grey/light blue, <br> stratus, <br> Reserve one mark for each photograph | $\mathbf{5}$ |
| 4(b) | 7/8 oktas, | $\mathbf{1}$ |
| 4(c)(i) | stratus is lower/cirrostratus is higher, | $\mathbf{1}$ |
| 4(c)(ii) | cumulonimbus is deeper/taller/bigger/greater vertical extent, <br> cumulonimbus can have a flat top, <br> Or emphasis on cumulus | $\mathbf{1}$ |


| Question | Answer | Marks |
| :---: | :---: | :---: |
| 5(a)(i) | 5, | 1 |
| 5(a)(ii) | waste/red mud, | 1 |
| 5(a)(iii) | caustic soda/lime, | 1 |
| 5(a)(iv) | alumina, | 1 |
| 5(b)(i) | India, | 1 |
| 5(b)(ii) | 19.0-19.3 million tonnes, | 1 |
| 5(b)(iii) | lacks (cheap) electricity, lacks capital/expensive process, shortage of technology, shortage of skilled workforce, | 1 |
| 5(c) | less tonnage needed so it is cheaper to import/transport alumina, | 1 |


| Question | Answer | Marks |
| :---: | :--- | ---: |
| 6(a)(i) | 82-85 (\%), | $\mathbf{1}$ |
| 6(a)(ii) | (some is) saline, (pollution = 0) <br> it is deep, <br> it will run-out/insufficient rainfall to renew it/finite/not sustainable, <br> it has to be extracted from beneath the surface/is not readily accessible, <br> supplies a small amount of water, | $\mathbf{2}$ |
| 6(a)(iii) | wells/boreholes/pumping up from depth/drilling, | $\mathbf{1}$ |
| 6(a)(iv) | sea/ocean/Mediterranean/Red Sea, | $\mathbf{1}$ |
| 6(a)(v) | expensive to desalinate, <br> poor/unpleasant taste, <br> disposal of the (residue) salt, | $\mathbf{1}$ |
| 6(b) | it could reduce the water that flows in the river/Nile in Egypt, <br> it could lead to a shortage of water for irrigation/HEP/industry/domestic use <br> it could reduce the store of water in the Aswan Dam, |  |

