MARK SCHEME
Maximum 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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| Question | Answer |  |  |  |  | Marks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1(a)(i) | (marked) footpath, |  |  |  |  | 1 |
| 1(a)(ii) | Tomasgrovi, |  |  |  |  | 1 |
| 1(a)(iii) | 916 (m), |  |  |  |  | 1 |
| 1(a)(iv) | 600 (m), |  |  |  |  | 1 |
| 1(b) |  | Square 6316 at Færes-fjellet | Square 6416 at Grønahorgi | Both these areas | Neither of these areas | 5 |
|  | lakes |  |  | $\checkmark$ |  |  |
|  | forest | $\checkmark$ |  |  |  |  |
|  | marsh | $\checkmark$ |  |  |  |  |
|  | glaciers |  |  |  | $\checkmark$ |  |
|  | land over 1100 m above sea level |  | $\checkmark$ |  |  |  |
|  | More than 1 tick per row $=0$, except for the first row where ticks in both the first two boxes and all of the first three boxes is allowed. |  |  |  |  |  |
| 1(c)(i) | Roesgrovi, |  |  |  |  | 1 |
| 1(c)(ii) | road, |  |  |  |  | 1 |
| 1(c)(iii) | cultivation, |  |  |  |  | 1 |
| 1(c)(iv) | valley completed clearly steeper than rest of slopes but not dropping below 200 m , (use the ruler device along the 200 m line) |  |  |  |  | 1 |
| 1(d)(i) | south east/east south east, |  |  |  |  | 1 |
| 1(d)(ii) | $1550-1750 \mathrm{~m} / 1.55-1.75 \mathrm{~km}$, |  |  |  |  | 1 |
| 1(d)(iii) | 568 m, |  |  |  |  | 1 |
| 1(d)(e) | on/near cultivated land, <br> along/near roads, <br> in valley(s)/on valley side(s), <br> west facing slope, <br> on gentle(r)/avoids steep(er), (on flat $=0$, but allow flat qualified) <br> on low(er)/avoids high(er)/200-500 m, <br> linear/dispersed/scattered/sparsely distributed, (nucleated spoils) none/few in forest, <br> (more) in north, <br> in centre/none in east/west, (also allow SE, NE, SW and NW) |  |  |  |  | 4 |


| Question | Answer | Marks |
| :---: | :--- | ---: |
| 2(a)(i) | Denver, | $\mathbf{1}$ |
| 2(a)(ii) | New York, | $\mathbf{1}$ |
| 2(a)(iii) | New York, | $\mathbf{1}$ |
| 2(a)(iv) | Denver, | $\mathbf{1}$ |
| 2(b) | east lost population/-ve migration/people moved out/allow emigration, <br> west gained population/+ve migration/people moved in/allow immigration, <br> more migration in east/less migration in west, <br> $-534 ~ 737 ~ i n ~ e a s t ~ a n d ~ 110 ~ 408 ~ i n ~ w e s t, ~$ | $\mathbf{2}$ |
| Allow Chicago and New York for east and Denver and San Francisco for <br> west. | $\mathbf{1}$ |  |
| 2(c)(i) | internal, <br> emigration, | $\mathbf{1}$ |
| 2(c)(ii) | natural increase/birth rate more than death rate/high birth rate/increased <br> birth rate, <br> international migration/migration from other countries/immigration, (not just <br> people moving in) |  |


| Question | Answer | Marks |
| :---: | :--- | ---: |
| 3 | steep, <br> V-shaped, <br> narrow/gorge, <br> no floor/flood plain, <br> steep long profile/steep gradient, <br> irregular long profile, <br> many valleys/dissected, <br> small valleys, <br> tributary valleys/confluence of valleys, <br> meandering/winding/zigzag valleys, (not river) <br> spur(s), <br> ridge(s), <br> interlocking spurs = 2, <br> dendritic pattern, <br> clifs, <br> grass/trees/bushes/scrub, <br> upper course/close to source (allow if referring to river), <br> bare rock (in background)/rocks (in foreground, not channel), <br> Contradictions spoil, e.g. gentle spoils steep. | $\mathbf{8}$ |


| Question | Answer | Marks |
| :---: | :--- | ---: |
| 4(a)(i) | $13^{\circ} \mathrm{C}$, | $\mathbf{1}$ |
| 4(a)(ii) | $23^{\circ} \mathrm{C}$, | $\mathbf{1}$ |
| 4(b) | 17 mm, | $\mathbf{1}$ |
| 4(c) | X, | $\mathbf{1}$ |
| 4(d) | high(er) angle of the sun (in summer)/sun overhead in summer, <br> rays more concentrated/rays pass through less atmosphere, <br> longer days, <br> little/less cloud cover, | $\mathbf{2}$ |
| 4(e) | high pressure, <br> descending air, <br> warming prevents condensation, (development) <br> stable air, <br> offshore winds, <br> cold ocean current, <br> distance from the sea, <br> rainshadow, | $\mathbf{2}$ |


| Question | Answer | Marks |
| :---: | :--- | ---: |
| 5(a)(i) | area drained by a river/catchment area of river, <br> divide between two drainage basins/boundary of a drainage basin, <br> Allow if expressed as an area or highland. | $\mathbf{2}$ |
| 5(a)(ii) | Ural, <br> Syrdarya, <br> lli, | $\mathbf{2}$ |
| 5(a)(iii) | Nura, | $\mathbf{1}$ |
| 5(a)(b) | large(st) discharge, <br> large(st) discharge in dry years, <br> less dependent on other countries/lower flow from other countries/large(st) <br> discharge excluding flow from other countries, <br> large catchment/drainage basin, <br> reservoir/dam/lake for storage, | $\mathbf{3}$ |


| Question | Answer | Marks |
| :---: | :--- | ---: |
| 6(a) | high(er)(est) in NW/WNW/W, <br> low(er)(est) in E/ESE/SE, <br> least/lower along coast/highest/higher inland (comparative needed), <br> use of a figure to support any of the above statements max 1 (e.g. <br> $1700 \mathrm{kWh} /\left(\mathrm{m}^{2}\right)$ in SE), | $\mathbf{3}$ |
| 6(b) | Germany lower, <br> highest in Germany lower than highest in South Africa, <br> lowest in Germany lower than lowest in South Africa, <br> all of Germany lower than lowest in South Africa, <br> Germany smaller differences/range of values, <br> Germany increases to south + South Africa increases to NW/WNW/W, <br> Or emphasis on South Africa. | $\mathbf{2}$ |
| 6(c) | (For) <br> SA has high solar radiation values, <br> SA has higher solar radiation then Germany, <br> area with cities/population has high solar radiation/1 650-2 100 $\mathrm{kWh} /\left(\mathrm{m}^{2}\right)$ <br> /more than Germany, (e.g. Johannesburg area) <br> large area to generate solar power, <br> (Against) <br> area with few cities/population has high(est) solar radiation/over <br> $\left.2100 \mathrm{kWh} / \mathrm{m}^{2}\right),(n o r t h ~ w e s t) ~$ <br> area with cities/population has low(est) solar radiation, (coast) <br> (Either) <br> discussion of transmission costs/distances, | $\mathbf{3}$ |

