Cambridge Assessment International Education

Cambridge IGCSE™

GEOGRAPHY **0460/23**

Paper 2 Geographical Skills **May/June 2022**

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 May/June 2022 series for most Cambridge IGCSE, Cambridge International A and AS Level and Cambridge Pre-U components, and some Cambridge O Level components.

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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.

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Question	Answer	Marks
1(a)(i)	A78/main road/dual carriageway/by-pass	**1**
1(a)(ii)	Museum	**1**
1(a)(iii)	Hotel/building (if using key alone)	**1**
1(a)(iv)	20 (metres)	**1**
1(b)(i)	1530–1580 metres	**1**
1(b)(ii)	87–93 (degrees)	**1**
1(b)(iii)	detached/separate; semi-detached/joined/rows/terraced/blocks(of houses); dense/compact/clustered/nucleated; back gardens/yards/large plots; curved roads/streets/crescents/oval/circular; cul-de-sac/dead end roads; housing 1 mark reserve street pattern 1 mark reserve	**3**
1(b)(iv)	large area/room for expansion; flat/gentle land; near road junction, access to main road/dual carriageway; near town/housing/Irvine for labour; near town/housing/Irvine for market; industrial estates nearby for components/exchange of ideas; river for water supply/cleaning or dumping waste; cheaper land on edge of urban area/flooding;	**3**

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Question	Answer	Marks
1(c)	*Human:* weirs; bridges; footbridge; straightened; jetty/dock/quay; *physical:* tidal; estuary; meanders/bends/curves (or description); mud/sand/shingle/deposition; mouth at Irvine Bay/Bar; bar (mouth at Irvine Bar = 2); overall flow to S/SE/SSE or from N/NW/NNW or SW then SE then SW; braided channel/splits and rejoins /island /eyot; tributaries/confluence (or description e.g., rivers joining); flows on gentle/low/flat land/channel gradient; variable width; levee/embankment (allow as either a human or physical feature) **2 mark reserve for human/physical**	**8**

Question	Answer	Marks
2(a)(i)	52–58% (200 degrees) = 55.55%	**1**
2(a)(ii)	middle income countries	**1**
2(a)(iii)	high income countries	**1**
2(b)	high birth rates; can't afford/unavailability of contraceptives; need children to work; desire for a son; need children to look after them in later years; lack of education on family planning; high level of infant mortality; culture/religion prohibits use of contraceptives; early marriage; lack of education for women so do not pursue a career;	**2**

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Question	Answer	Marks
2(c)	need more care homes; drain on/more money spent on health services/hospitals understaffed; more money needed for pensions; labour force shortages/carers not available; burden on economically active; government raises taxes to pay; rise in the amount of chronic disease and disability;	**3**

Question	Answer	Marks
3(a)(i)	natural vegetation cut down/reduced/damaged/deforestation; less interception/more surface runoff/impermeable surfaces/tarmac; loss of habitat/disruption of food chains; reduced biodiversity/less species; more air pollution/fumes/CO^2/greenhouse gases from cars/chimneys/house; noise pollution scaring wildlife; light pollution disturbs animals; cars kill wildlife;	**3**
3(a)(ii)	leaving some trees in place; planting new trees/plants/vegetation/replanting/afforestation; leaving/creating green open spaces/wildlife corridors/zones/parks; fencing/barrier; Focus must be on the natural environment.	**2**
3(b)	Parking; security/lighting; large(r) store–more choice of goods/more stock; wide roads/accessible by road; lack of traffic congestion/clear roads; covered/under one roof/indoors; lack of crowds/quiet; pavements/pedestrian access; level site/on one level/disabled access;	**3**

Question	Answer	Marks
4(a)(i)	Fault/slip line	**1**
4(a)(ii)	Focus	**1**
4(a)(iii)	Epicentre	**1**
4(b)(i)	2004 and 2010	**1**

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Question	Answer	Marks
4(b)(ii)	size/intensity/magnitude of earthquakes; depth/focus of earthquake; number/frequency of earthquakes/number of aftershocks; building condition/earthquake proofing; land-use planning/zoning; level of economic development/LEDC's V MEDC's; level of preparedness of the population/drills/education/awareness; speed of response/availability of medical teams/rescue; population density/rural v urban; less emergency relief provided; post-earthquake provision and planning (shelter/food/medical aid); areas of unstable soils/geology; time of the day; tsunamis; Max. 1 mark for secondary effects e.g., tsunami, spread of disease	**4**

Question	Answer	Marks
5(a)(i)	200 (mm)	**1**
5(a)(ii)	2 °C	**1**
5(a)(iii)	there are two wetter seasons; temperatures are high throughout the year; July is the coolest month;	**3**
5(b)(i)	Tapir and howler monkey	**1**
5(b)(ii)	fewer spider monkeys/no food for spider monkeys; less food/energy/other food source needed for ocelots/fewer ocelets; less food/energy/other food source needed for jaguars/fewer jaguars; fewer secondary consumers/carnivores who eat spider monkeys;	**2**

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Question	Answer	Marks
6(a)	majority of raw materials from LEDCs; paper sourced from MEDCs/N America/Europe; raw materials/sugar/coffee beans from many/several continents/many countries/named examples (at least two); coffee shops in many/several continents/many countries/named examples (at least two); (Note: 'number of coffee shops worldwide' similar to graph Y axis, so look for context); Valid statistic from the map (1 mark max) e.g., over 1000 coffee shops in the US, 25–99 in Australia; number of shops has increased/rapid expansion of coffee shops; Valid statistic from the graph quoting years (1 mark max) e.g. the number of coffee shops has increased from 200 in 1987 to 5800(almost 6000) in 2003 (any two years);	**5**
6(b)	*Education about soil management techniques* ensures soil fertility/healthy soil; educates about contour ploughing/crop rotation/cover cropping /preventing/slowing down soil erosion/soil degradation /prevents overuse of fertilizer; *Agreed prices for coffee beans* ensure economic stability for farmers/stable/guaranteed /fair price/trade; means farmers can support their families adequately /afford goods and services; maintains farming as an occupation; enables forward planning/stimulates further economic development; *Research into disease resistant trees* ensure crops and farmers income can be maintained/increases or maintains yields; less need to clear land to plant new trees/yield more reliable /prevents loss of crop; reduces use of pesticides;	**3**