Cambridge Assessment International Education

Cambridge IGCSE™

GEOGRAPHY **0460/41**

Paper 4 Alternative to Coursework **May/June 2021**

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 2021 series for most Cambridge IGCSE™, Cambridge International A and AS Level components and some Cambridge O Level components.

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[Turn over

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)	Headland and	**1**
1(b)	Movement of material up and down the beach is repeated with each wave. Prevailing wind influences the direction of longshore drift movement. Waves approach the coastline at an angle. 3 @ 1	**3**
1(c)	1 Would be able to communicate/call/use it if they got into difficulty/got separated/in an emergency/if needed help 2 To take appropriate clothing or example/take sunblock To see if it is safe to work/not go/work if storm is forecast 3 Cannot work at high tide/not get cut off by the tide/less dangerous to go at low tide/dangerous at high tide 3 @ 1	**3**
1(d)	(Create a transect) Create transect line up beach/use a rope/tape measure to make a line Pick up a piece of shingle at regular distance/every 10th piece of shingle /pick up piece of shingle every metre Select beach material touching tape OR (Use quadrat) Put quadrat on beach/throw onto ground Sample shingle within each quadrat Use random numbers to identify a square in quadrat/pick shingle from different squares Repeat at regular/equal intervals up beach OR Pick up 10 pieces of shingle **at random**	**3**
1(e)(i)	Put piece of shingle into 'teeth'/prongs/gap (of callipers/micrometer)/adjust callipers to hold piece of shingle Measure length on the scale/read or look at the number on scale/measure gap between 'teeth'/measure length with ruler	**2**
1(e)(ii)	Plot 6.4 cm at 600 m	**1**

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Question	Answer	Marks
1(e)(iii)	Best-fit line on Fig. 1.4 At least 6 plots on one side of the line (can include one plot on the line)	**1**
1(e)(iv)	Hypothesis is **true**/**correct** – 1 mark reserve Measurements/length of shingle decrease (along beach/from south west to north east)/negative correlation 1 mark for paired data to show decrease e.g. site 1/0 m = 8.4 cm and site 15/1680 m = 5.1 cm OR decrease by 3.3 cm between site 1 and site 15 Credit any two sites which show a decrease No credit for anomalies No credit for Hypothesis is incorrect/partially correct. If no hypothesis conclusion credit evidence	**3**
1(f)(i)	Index score 3 4 12 0 5 0 Total index score = 24 1 mark for correct index scores, 1 mark for correct total	**2**
1(f)(ii)	Index scores are subjective/compared with diagram/measured by eye /estimated Long axis results are **measured**/use callipers/uses equipment	**2**
1(f)(iii)	Plot site 15 = 41 on graph	**1**
1(f)(iv)	**No**/hypothesis is **incorrect/not supported** – 1 mark reserve There is no clear pattern/degree of roundness varies/fluctuates along beach /no correlation/no relationship/increases and decreases/no clear trend Credit 1 mark for evidence which disproves hypothesis e.g. Site 4/360 m = 58 and site 12/1320 m = 31 Site 7/720 m = 31 and site 12/1320 m = 31 No credit for Yes/hypothesis is correct/partially correct. If no hypothesis conclusion credit evidence	**3**

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Question	Answer	Marks
1(g)	Traps pebbles or beach material or sand/prevents movement of material along beach/encourages deposition To make the beach wider To slow down/reduce longshore drift/stop/prevent longshore drift Protect the beach	**2**
1(h)	Count number of waves breaking/going up beach/hitting object or person /coming into beach/coming into shore/float rises and falls Clicker/tally chart to count waves Count for specified time period/certain time/1–10 minutes Use a stopwatch to measure time Repeat **and** work out average	**3**

Question	Answer	Marks
2(a)	Rural-urban fringe	**1**
2(b)(i)	Linear/long and thin Nucleated Y-shaped/P-shaped (or appropriate shape)	**2**
2(b)(ii)	To the west south west/south of the **main** road To the south/south east/south west/north west (of the original village) To the north/east of woodland Away from the roads/further out from road/spread out/towards woodland /along the road/on outskirts/around original village	**2**

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Question	Answer	Marks
2(b)(iii)	People moving from the city/urban-rural movement/escape from city Attraction of more land/houses spread out/space for garden Increase in car ownership Growth of commuting to work Attraction of living in countryside/peaceful/less polluted/better living conditions /attractive scenery People move to live around the city/rural to urban (fringe) migration 2 @ 1	**2**
2(c)(i)	Obtained from another source/from internet/already available Not collected by students themselves/collected by other people Refined/collated/organised data	**1**
2(c)(ii)	Plot 9400 in 2017 (need line)	**1**
2(d)(i)	Credit appropriate day and time Weekend/non-working day Friday/Saturday/Sunday/holiday Any appropriate time between 09.00 and 18.00 If a workday is suggested credit if appropriate time e.g. Monday at 17.00/between 12.00 and 13.00/any time after 16.00/before 09.00	**1**
2(d)(ii)	People will not be at work/working age group will not be available on working days/lunch time/people out shopping/more time to answer	**1**
2(d)(iii)	Things to do: 2, 3, 4 Things not to do: 1, 5, 6 Credit 1 mark for each column – Things to do and Things not to do	**2**
2(e)(i)	Ask the people if they lived in the town/which area do you live in	**1**
2(e0(ii)	Systematic	**1**
2(f)(i)	Plot 19% 30–39 years and 6 % 40 and over 1 mark for dividing line at 94% and 1 mark for shading	**2**

Question	Answer	Marks
2(f)(ii)	Hypothesis is **false**/in**correct** – 1 mark reserve Most people/majority/over 50%/over half have lived in the settlement for 20 years or more/more than 20 years 53% have lived there for 20 years or more/more than 20 years or 47% have lived there for less than 20 years No credit for Hypothesis is true/correct. If no hypothesis conclusion then credit evidence	**3**
2(f)(iii)	Plot 27% at 21–30 km (ignore shading)	**1**
2(f)(iv)	**Yes**/hypothesis is **true**/**correct** – 1 mark reserve 57% travel more than 20 km or 43% travel 20 km or less No credit for No/hypothesis is incorrect/partially correct. If no hypothesis conclusion then credit evidence	**2**
2(g)	Low crime rate convenient public transport routes nearby countryside is good for relaxation Accept 4,5,2 if candidate numbers them in table Credit 2 max if used correct numbers only (4,5,2) 3 @ 1	**3**

Question	Answer	Marks
2(h)	More customers for local services/shops More active local community/decrease in community spirit Rise in house prices/rent Increase in traffic/traffic noise/congestion/parked cars Noisy residents/noise from school Farmers sell land/loss of farmland/destruction of fields Better/more public transport More shops open/local school opens More jobs **in** shops/building houses Litter Specified crime Loss of amenity value if specified (e.g. picnic spots) Impact on scenic beauty/spoils scenery ^ = more jobs/economy grows More customers More noise More transport More services/facilities/amenities More demand for water/food/electricity More busy/more crowded More houses built Destruction/loss of vegetation/woods/less green space Loss of habitats/reduction in wildlife/loss of biodiversity Air pollution/traffic fumes Noise scaring animals/disturbs wildlife NOT: more trees planted Higher flood risk due to impermeable concrete/river pollution Deforestation 1 mark reserve for people and natural environment	**4**