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Cambridge Assessment International Education

Cambridge IGCSE™

GEOGRAPHY **0460/43**

Paper 4 Alternative to Coursework **October/November 2020**

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 2020 series for most Cambridge IGCSE™, Cambridge International A and AS Level and Cambridge Pre-U components, and some Cambridge O Level components.

This document consists of **9** printed pages.

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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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MARKING POINTS/RATIONALE

1 Ticks should be used for all correct points. Ticks must equal marks awarded. Tick must be where mark is awarded.
2 Crosses should only be used on specific errors such as plotting graphs, maps, calculations and reserved hypothesis marks.
3 There are no development marks on this paper. Award elaborations or qualifications separate marks as instructed.
4 Other electronic annotations that should be used on Paper 42 only are:

- ✓**HA** *or* ***XHA*** *or* ***^ HA*** *for reserved hypothesis marks. (See ms refs).*
- ✓***J*** *for an answer that is "just" OK.*
- ***^*** *where something is missing/not quite there.*
- ***LNK*** *where two parts of an answer can be linked for creedsit e.g. a pair of stats.*
- *Brackets* ***( )*** *to enclose a specific sentence.*
- ***?*** *only where the answer is illegible.*
- *There are two lined pages at the end of this paper (pp16/17) and three blank pages (pp 18/19/20). You must annotate* ***SEEN*** *on these pages to show you have seen them. Be careful to check for work here.*
- *Where other work is away from the allocated answer space, you must use the linking tool to mark it.*
- *If there is NO RESPONSE (NR) you must put* ***X*** *on graphs, tables, maps or calculations equal to the number of marks that would be awarded*
- *On text NO RESPONSES just give* ***NR*** *as a mark; no need to annotate.*

NO OTHER ANNOTATIONS ARE REQUIRED
No mark scheme is comprehensive. Examples are provided but candidates may provide other answers not listed here. In these cases either refer to your TL or use your professional judgement in awarding marks.

PLEASE CHECK VERY CAREFULLY THAT YOUR TICKS MATCH THE MARK(S) GIVEN TO THE ANSWER AND THAT THE ANNOTATIONS ARE IN THE CORRECT PLACE ON THE SCRIPTS

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Question	Answer	Marks
1(a)(i)	Maximum-minimum thermometer would need to be left in square / impractical to leave thermometer in square / impractical to put Stevenson Screen in square Likely to be taken / damaged / tampered with / interfered with / confiscated Students are not measuring maximum / minimum temperatures / need temperatures at midday / early evening	**2**
1(a)(ii)	Give instant readings / saves time / faster results Easy / clear to read / large digital readout / shows temperature clearly Don't need to know how to read a thermometer Exact figures / accurate / precise No chance of making mistake / misreading / less chance of human error Portable / easy to carry round Can be used at more than one site / no need to reset Can download to computer / store data / data can be logged / records data itself Safe if dropped / will not break / less fragile Do not need comparison 3 @ 1	**3**
1(b)(i)	3 correct plots = 2 marks 1 or 2 correct plots = 1 mark Plot 22.5, 26.0, 27.2 on correct day lines Line is not needed	**2**

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Question	Answer	Marks
1(b)(ii)	Hypothesis is **partly true** / **false** – 1 mark reserve **Partly true** **A** has highest / higher temperatures than D / E / other sites **B sometimes** has higher temperatures / equal to / lower temperatures than D / E OR **C** has lowest / lower temperatures than D / E / other sites **False** **B sometimes** has higher temperatures / equal to / lower temperatures than D / E **C** has lowest / lower temperatures than D / E / other sites Credit 1 mark (reserve) for data to show difference between two sites Credit highest temperature / range of temperatures / average temperature / any two individual temperatures which support statement e.g. A highest temperature = 28.2° and E highest temperature = 24.5° C temperatures vary between 17.5° and 22.4° and D temperatures vary between 18.8° and 24.3° A average temperature = 24.9° and D average temperature = 22.2° At A = 27.1° and at D = 23.4° Don't need reference to day in stats Accept list of temperature stats if relevant to statement No credit for hypothesis is true If no hypothesis conclusion credit evidence	**4**
1(c)(i)	Reference to **any** two appropriate sites Sites B / C are higher **than** A / D / E (or vice versa) Site A is higher **than** site E (or vice versa)	**1**
1(c)(ii)	Reference to **any** two days Answer can be general or specific to one site e.g. Days 1 / 2 / 3 are higher than days 4 / 5 / 6 Temperature falls from day 4 to day 5 at site A Temperatures increase from day 4 to day 7 Temperature drops to day 4 then rises	**1**
1(d)(i)	Wind vane	**1**
1(d)(ii)	Plot South = 3, West = 2 at site B 2 @ 1	**2**

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Question	Answer	Marks
1(d)(iii)	Cups / disks / wings revolve / spin / rotate / wind pushes cups Meter / screen / scale / dial / numbers **counts / records** number of revolutions / **shows** wind speed	**2**
1(d)(i)(v)	Plot 5 km/hr on day 1, 14 km/hr on day 7, Plots must be on site B line. If no day numbers on plots = 1 max if plots are correct 2 @ 1	**2**
1(d)(v)	Wind speed varies more at site C than site E **–** 1 mark reserve (✓HA) Wind speed varies from 2 to 24 / by 22 km/h at C **and** from 10 to 22 / by 12 km/h at E Wind direction from W, NW, E / 3 compass points / directions at C **and** from SW, W, N, E, SE, S / 6 compass points / directions at site E No credit for wind direction varies more at site C than site E If no hypothesis conclusion credit evidence	**3**
1(e)	Temperature: **Shade** / in **shadows reduces** temperature **Heat** from buildings **increases** temperature **Tarmac** / footpath / pavement **increases** temperature **Garden reduces** temperature Wind: (Funnels through) **gaps** between buildings increases speed Swirls around **buildings** and changes direction Shelter by **buildings / trees / obstacles** decrease speed **/** trees/buildings / obstacles / objects in the way block the wind / wind slowed down by buildings / trees / obstacles / objects in the way 1 mark reserve for temperature and wind	**3**
1(f)(i)	The amount of moisture in the air as a percentage of the total moisture it could hold at that temperature.	**1**
1(f)(ii)	Credit how it is used **Put** it in Stevenson Screen **Read** temperatures on dry and wet bulb thermometers / both thermometers **Calculate / measure** difference in temperature / temperature depression (dry bulb temp minus wet bulb temp) **Use** relative humidity table to calculate RH % / RH table shows dry bulb temperature and temperature depression	**3**

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Question	Answer	Marks
2(a)	330 km	**1**
2(b)(i)	Tertiary	**1**
2(b)(ii)	Completion of pie graph: services 59% and transport 16% 1 mark for dividing line at 59% 1 mark for shading Credit 1 mark for dividing line at 16% if shading is correct	**2**
2(c)	Manual work / rely on labour Work done using simple / hand held tools Rock is broken up by pick Rock is sifted into powder / rock is sieved / rock is thrown onto sieve using a spade or shovel Allow net Both men and women work at quarry 2 @ 1	**2**
2(d)(i)	Systematic sampling Ask every eighth or nth person (must be more than 5) / regular pattern Avoid bias / fair test quick method / reliable OR Random sampling Use random numbers to identify people / ask next person they meet / no pattern / order to choosing people Avoid bias / quick method / fair test / reliable OR Stratified / quota Ask appropriate age / gender to balance / get representative sample Avoids bias / fair test / reliable If wrong method named or method does not match description, credit 1 mark max for method and description	**3**
2(d)(ii)	**20** – 40 (or reasonable alternative between 35 – 40) 41 (or reasonable alternative) – **60** Accept reasonable ranges if not overlapping 2 @ 1	**2**
2(d)(iii)	Plot 4 males 12 females from Senegal If order of bars is reversed credit 1 mark if shading is correct If bars are not shaded but correct order credit 1 mark If bars are not shaded and wrong order credit 0 2 @ 1	**2**

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Question	Answer	Marks
2(d)(i)(v)	Hypothesis is **false** – 1 mark reserve (✓HA) Most / more / over half workers are female OR less than half workers are male Most / more / over half workers are from other countries OR less than half workers are from The Gambia Most / more / over half workers are female **and** not from the Gambia / from other countries OR Less than half workers are male **and** from The Gambia = 2 marks Credit 1 mark for data: 24 males and 26 females / 24 out of 50 are males / 48% workers are male 18 from The Gambia and 32 from other countries / 18 out of 50 are from The Gambia / 36% workers are from The Gambia and 72% from other countries 11 out of 50 / 22% are males from The Gambia 11 out of 24 are male No credit for hypothesis is true If no hypothesis conclusion credit evidence	**4**
2(d)(v)	Plot 14% - 3 or 4 years and 12% - more than 4 years on divided bar graph 1 mark for dividing line at 88% 1 mark for shading Credit 1 mark for dividing line at 86% if shading is correct	**2**
2(e)	Quarry work is better paid than farm work Earn money at the quarry when there is no work on the farm in the dry season Send money to my family back home 3 @ 1	**3**
2(f)(i)	**Interview / talk to** worker / manager / person in charge Credit e.g. of questions for 1 mark such as 'Do you think the quarry is a dangerous place to work?' OR 'What safety equipment are you given?' **Take photos** / **observe** workers doing their jobs / observe the quarry **and** note the working conditions **Research** secondary data / internet **for** health and safety records / number of accidents recorded at quarry Do a **bi-polar survey to** judge the working conditions themselves **Record / count /tally** how many workers have safety equipment	**4**

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Question	Answer	Marks
2(f)(ii)	Manager will not want to give the information Students are stopped by manager / manager may not allow students to go in / students don't have permission to go in or interview Worker may not want to give information / be interviewed / afraid of being fired People may lie Manager / workers / people are too busy / don't have time (Health and safety) records may not exist / are inaccurate / there is no information on-line Manager wants to put on a show which gives wrong impression Students may not speak same language as manager / workers	**2**
2(f)(iii)	Must leave their family / work away from family / work away from home Long working hours Dirty job Dangerous / unsafe work / risk of injury / risk of getting hurt / danger of being hit by falling rock / no safety equipment / quarry face may collapse / risk of accidents Low wages / poorly paid / exploitation Breathing problems / dust inhalation / eye irritation 2 @ 1	**2**

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