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Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

GEOGRAPHY **0460/41**

Paper 4 Alternative to Coursework **October/November 2018**

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.

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This syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

This document consists of **6** 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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Question	Answer	Marks
1(a)(i)	Counting must start and finish at the same time at all counting sites A tally method must count and record vehicles in groups of five 2 @ 1	**2**
1(a)(ii)	Long enough for **reliable** data Not get bored / lose concentration / not affected by fumes / sunburn	**2**
1(b)(i)	Site 10	**1**
1(b)(ii)	Plot bars at 17.00 = 950 **and** 19.00 = 640 2 @ 1	**2**
1(b)(iii)	Hypothesis is **correct / true** – 1 mark reserve (✓HA) Highest traffic numbers / most traffic at 09.00 / 13.00 /17.00 **and** lowest traffic numbers / least traffic at 07.00 / 11.00 / 19.00 At site 5 most traffic at 09.00 **and** at site 6 most traffic at 17.00 At site 5 most traffic at 09.00 **and** least traffic at 07.00 At site 6 most traffic at 17.00 **and** least traffic at 07.00 Credit any 2 comparisons which show variation in numbers during the day – highest / lowest, higher / lower, more / less, only as alternative to less than **Reserve** 1 mark for paired data (need traffic amounts and times) e.g. total traffic number varies from 502 at 07.00 to 950 at 17.00 e.g. site 5 = 100 at 09.00 and site 6 = 94 at 17.00 Site 5: 1 mark for paired data comparing two times e.g. 32 at 07.00 and 100 at 09.00 Site 6: 1 mark for paired data comparing two times e.g. 25 at 07.00 and 94 at 17.00	**4**
1(b)(iv)	People going to **work** / leaving work / working time / jobs People coming for **shopping** Parents taking children to **school** Less traffic in early morning because most people still at **home** Weekend / **working day** / holiday time **Lunch**time 2 @ 1	**2**
1(c)(i)	Flow line at site 8 = 501 vehicles moving south	**1**
1(c)(ii)	Bike Motor bike Bus / minibus / coach Lorry / truck Van Taxi / tuk tuk Emergency vehicle or example Need three categories for 1 mark	**1**
1(d)(i)	Systematic	**1**

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Question	Answer	Marks
1(d)(ii)	Impossible to ask everyone / quicker than asking everyone Removes bias / student doesn't choose 2 @ 1	**2**
1(e)(i)	Completion of divided bar graph – 5% at 14.00–15.59 and 37% at 16.00–17.59 1 mark for dividing line at 62%, 1 mark for shading both categories If categories are reversed credit 1 mark maximum (dividing line at 94% and appropriate shading)	**2**
1(e)(ii)	Time of worst or more congestion according to survey answer is time when most or more vehicles were counted / both are high at the same time 16.00–17.59 in questionnaire and 17.00 in traffic count OR 08.00–09.59 in questionnaire and 09.00 in traffic count OR 12.00–13.59 in questionnaire and 13.00 in traffic count	**2**
1(e)(iii)	Pie graph completion – 3 days = 28% and 1 day = 4% 1 mark for dividing line at 96%, (accept 95–97)1 mark for shading If categories are reversed credit 1 mark maximum (dividing line at 72% and appropriate shading)	**2**
1(e)(iv)	Traffic congestion is a problem at two / three times of day / 08.00–09.59, 12.00–13.59, 16.00–17.59 (need 2 or 3 specific times) Traffic congestion is a problem on 5 days of the week / everyday / more than half of the week / at least 3 days Traffic congestion is a problem on Monday–Friday / working days / weekdays Credit percentage data for 1 mark **maximum** (not reserve) e.g. 32% think congestion is worst at 08.00–09.59 / 22% at 12.00–13.59 / 37% at 16.00–17.59 58% think traffic congestion is a problem on 5 days / 10% everyday / 96% more than half of the week 23% think traffic congestion is a problem on Friday / 98% on working day or Monday – Friday	**3**
1(f)	By-pass / ring road / underpass / flyover / tunnel / bridge Park and ride Bus lane Cycle lane / bike hire scheme Car sharing More public transport / cheaper public transport or e.g. such as metro train Parking restrictions / more car parks One way streets Restrict traffic to certain days / license plate policy Congestion charge Flexible working hours Traffic lights / roundabouts / police Decentralisation of shops / services 3 @ 1	**3**

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Question	Answer	Marks
2(a)(i)	6th (June) at 00.24	**1**
2(a)(ii)	To identify the times of high / low tides / cannot do fieldwork if high tide / do fieldwork at low tide See when the sea would be safe to take measurements in / not get cut off by the tide / safety	**2**
2(a)(iii)	15.00	**1**
2(a)(iv)	To wear appropriate clothing / waterproof clothes Check weather conditions for stormy weather / strong winds / thunderstorm Avoid sunburn / frostbite, etc. 2 @ 1	**2**
2(b)	**Wind** drive **waves** / wave move in direction of wind **Waves** come to the beach at an angle / oblique Swash / waves carries **materia**l up the beach at an angle / diagonally Backwash takes **material** back down the beach at right angles / vertically / straight down / under gravity OR **material** moves in a zig-zig way carried by swash and backwash Process is **repeated** with each wave **Prevailing** wind determines which direction the beach material moves / direction of longshore drift	**4**
2(c)(i)	Make them easy to see / stand out / recognise / identify / find them later on See how far or in what direction the pebbles had moved / watch their movement	**1**
2(c)(ii)	Completion of bar = 21 pebbles and long axis measurement = 4.0 cm 2 @ 1	**2**
2(c)(iii)	Pebbles are moved (west) away from starting point / pebbles are moved along or across beach / coast Most pebbles moved between 20.1–30 m OR many / lots of pebbles moved between 30.1–40 m / 10.1–20 m Pebbles become smaller as distance increases / smaller pebbles are moved further than larger pebbles Credit comparative data to **2** marks **maximum** e.g. average pebble size 6.9 cm moves 10.1–20 m and average pebble size 3.2 cm moves 50.1–60 m e.g. 40 pebbles move 20.1–30 m and 5 pebbles move 50.1–60 m	**4**
2(d)	Wooden fence / barrier / bars Traps pebbles or sand or beach material / prevents movement of material along coast / beach	**2**
2(e)(i)	Work as a group / people work together **and** agree scores / discuss / calculate average Do the survey individually **and** calculate the average Do the survey on same day / in similar conditions	**2**
2(e)(ii)	Complete bars for gabion: access –1, safety +1, costs –1, disturbance –2 Total score = (+)1	**2**

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Question	Answer	Marks
2(e)(iii)	Partially support / for some defences / in some cases / on one hand ...on the other hand / mainly / some positive and some negative / 3 positive and 2 negative / to some extent – 1 mark reserve Positive bi-polar scores for groyne, gabions and beach replenishment Negative scores for rip rap and sea wall Defences with negative scores or e.g. still provide some benefits e.g. protects land / stops erosion OR Defences with positive scores or e.g. are not as effective in protecting land / stopping erosion OR Focus on two defences e.g. sea wall has more negative scores than positive scores whereas beach replenishment has more positive scores than negative scores Reserve 1 mark for paired total data – 1 positive and 1 negative score e.g. groyne = (+)3 and rip rap = –4	**4**
2(f)	Count number of waves breaking / going up beach / hitting object or person / float rises and falls Count for specified time period / 1–10 minutes Use a stopwatch to measure time / clicker / tally chart to count waves Take an average of a number of counts	**3**

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