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Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

GEOGRAPHY **0460/42**

Paper 4 Alternative to Coursework **May/June 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.

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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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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>1(a)</td><td>
<table>
<tr><th>Order</th><th>How often they are bought</th><th>Average price of goods</th><th>Distance people are willing to travel</th></tr>
<tr><td>High</td><td>Infrequently / not often / low / rarely</td><td>high / expensive / maximum</td><td>further / long / far / maximum / large</td></tr>
<tr><td>Medium</td><td>moderate frequency</td><td>moderate price</td><td>medium distance</td></tr>
<tr><td>Low</td><td>frequently / often / high</td><td>low / cheap / small</td><td>short / less / not far / close / small</td></tr>
</table>
Mark as vertical High / Low <u>pairs</u> i.e. 1 mark for How often; 1 mark for Price; 1 mark for Distance.
(3 × 1)</td><td>3</td></tr>
<tr><td>1(b)(i)</td><td>Construction of divided bar graph (Fig. 1.3).
1 mark for two dividing lines at 7 and 20 from left (1)
1 mark for third dividing line at 45 from left (1)
1 mark for shading in correct order from left (1)
(3 × 1)</td><td>3</td></tr>
<tr><td>1(b)(ii)</td><td>Yes / hypothesis is TRUE – <u>1 mark reserve</u>

<u>High order</u> – greater <u>numbers</u> in Central Ladprao Plaza (1) with 114:7 (1)
<u>Medium order</u> – greater <u>numbers</u> in Central Ladprao Plaza (1) with 173:13 (1)
<u>Low order</u> – greater <u>numbers</u> in Central Ladprao Plaza (1) with 88:25 (1).

Allow 2 max if make a general statement e.g. more high, medium, low order in CLP. Can accept refs to ‘only’ for statement mark;

Can compare <u>numbers</u> between orders in both centres;
e.g. Most / biggest number in CLP are middle order but largest in LV is low order (1) with 173 in CLP and 25 in LV (1)

Credit 1 mark MAX / RESERVE for paired data comparing the two shopping centres.</td><td>4</td></tr>
</table>

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Question	Answer	Marks
1(c)(i)	Ideas such as: Choose a variety of people / choose people of different age / gender / types / adults only (1) Decide on sample size / how long to ask people for (1) Don't ask people you know (1) Introduce yourself / explain purpose of survey (1) Have a system for choosing people such as every 10th person / random / have a sampling method (1) Accept if people don't want to answer / too busy / or fill it in / don't argue / be polite / thank them (1) Don't approach people in a big group / work in pairs or groups / don't work alone (1) Don't block pavements / doorways (1) Go to different parts of shopping area / don't all go to the same area (1) (3 × 1)	**3**
1(c)(ii)	Pie graph (Fig. 1.5) completion. One dividing line at 80% clockwise from 0% (1) 1st largest slice (35–80) shaded Near home; 2nd smaller slice (80–0) shaded Good value for money (1). MUST USE SHADING FROM KEY. (1 + 1)	**2**
1(c)(iii)	Hypothesis is **TRUE** – 1 mark reserve. Main / most top reason for shopping at each centre is different / top two reasons are different (1) 'Large variety' is top reason in Central Ladprao Plaza but 'near home' is top in La Villa (1) 'Near work 2nd reason in CLP but 'good value for money' 2nd reason in LV (1) Credit paired data to show difference to 1 mark MAX / RESERVE 'Large variety' is 35% in Central Ladprao Plaza but 'near home' 45% in La Villa (1). 'Near work' is 22% in CLP but 'good value for money' is 20% in LV (1) Credit grouped data for top two reasons e.g. 57% in CLP and 65% in LV (1)	**4**
1(d)(i)	Plot bar for 7 cars at La Villa on Fig. 1.6. (1).	**1**
1(d)(ii)	Allow any two differences in statements and / or data between centres. No need to compare as long as differences are stated. Differences such as: Car is most popular in Central Ladprao Plaza but monorail is most popular in La Villa (1) Underground train is popular in CLP but not used in LV (1) 0 / nobody uses monorail in CLP but 20 people use it in LV (1) (1 + 1)	**2**

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Question	Answer	Marks
1(d)(iii)	Ideas such as: Distance to travel / from home to shopping centre (1) How long to travel to shopping centre / which method is faster (1) Likely duration of visit / how long shoppers stay (1) What / how much they are buying (1) Availability of regular bus service / underground train / monorail / car park / pedestrian precinct / cycles (1) Cost of car parking (1) Weather conditions / weather forecast / likely to travel by car if raining (1) Cost of travel / do shoppers own a car / can shoppers afford car / car sharing / can shopper afford petrol or bus fare (1) Traffic congestion / amount of traffic (1) How much time they have to shop (1) Risk of crime / safer to drive / prefer privacy / independence (1) Time of day (1) (3 × 1)	**3**
1(e)(i)	*Area served by a town or service* (1).	**1**
1(e)(ii)	Must refer to use of the data obtained. Examples Put results of questions in tables (1) Locate two shopping centres on 1 or 2 maps (1) Locate districts of Bangkok on a map (1) Decide on a key for dividing numbers into groups (1) Choropleth shading to show number of people from each district (1) Plot lines on map to show distances to each district (1) Draw a line / frame around furthest distances to show sphere of influence (1) Calculate range / average distance (1) Work out maximum distance travelled (1) (4 × 1)	**4**

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Question	Answer	Marks
2(a)(i)	*learn how to work safely in the river* *practise fieldwork techniques* 1 mark each correct choice (Choices 3 and 4): (1+1)	**2**
2(b)(i)	Examples Measure 10 m distance along river / downstream / upstream (1) Put two survey poles on / in river bed / put poles in middle of bed (1) Poles must be vertical (1) Students hold ranging poles at either end of measured distance (1) Agree height on ranging pole / at or near top of poles (1) Lines up identified position (1) Use clinometer from agreed height on 1 pole to same height on other pole (1) Read off / measure / find the angle / degrees (1) NOT slope / gradient. Repeat several times and calculate average (1) 1 mark MAX / RESERVED for naming equipment if used correctly e.g. clinometer, ranging pole / poles / survey poles, tape measure. Credit appropriate labelled sketch if given. 1R + (4 × 1)	**5**
2(b)(ii)	Examples Remove the effect of any anomaly (1) Gives an average result (1) One result may be inaccurately measured / eliminates error (1) (2 × 1)	**2**
2(c)(i)	Site 1 (1).	**1**
2(c)(ii)	Straight line plot from 4 (above 0) to 0 (on 10) for site 3 (1). Line must go from 4 to 10 for credit.	**1**
2(c)(iii)	TWO POSSIBLE DECISIONS ACCEPTABLE Hypothesis is **FALSE / NOT TRUE** – 1 mark res. Evidence: Overall gradient is less steep or less at Site 5 than at Site 1 / downstream OR Site 1 is steepest (1) **NOT** refs to any 2 sites. At Site 5 gradient is 6° but at Site 1 it is 9° (1 RESERVED Data) **OR** Hypothesis is **PARTLY FALSE / PARTLY TRUE** – 1 mark reserved Evidence: Gradient is less steep downstream for first 3 sites BUT last 2 sites steeper than Site 3 / overall gradient less but anomaly at Site 3 (1) e.g. Site 1 9° falls to 4° at Site 3 BUT increases to 7° at Site 4 / 6° at Site 5. (1 RESERVED Data)	**3**

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Question	Answer	Marks
2(d)(i)	Examples Rocks selected may not be typical / representative of the rocks at that site / anomaly (1) All rocks may have been taken from same area of river bed / not across channel / taken from same place (1) Not a fair / reliable sample / students choose rock / bias (1) (1 + 1)	**2**
2(d)(ii)	Systematic (1)	**1**
2(d)(iii)	Plotting length of pebble and average length on Fig. 2.2. Length = 13.4 plot above Site 2 (1). Average length = a horizontal line at 7.2 above Site 2 (1) (1 + 1)	**2**
2(d)(iv)	**NOTE**: Decision is given as **PARTLY TRUE**; do not credit any decision by the candidate. Evidence Overall decrease in size / average size from site 1 to site 5 (1) Main anomaly to trend is site 3 which contains largest average size (1) 1 mark MAX. for paired average data from any two numbered sites e.g. Site 1 9.4 cm decreases in size to 6.8 cm at Site 5 (1) Anomaly at Site 3 which at 10.6 cm largest / larger than Site 1 at 9.4 cm (1) (3 × 1)	**3**
2(d)(v)	Examples Attrition OR pebbles crash into each other (1) Abrasion / corrasion OR hitting river bed / bank reduces size (1) Corrosion / solution OR water dissolves rocks (1) Smaller pebbles moved further downstream as lighter to transport (1) Smaller pebbles found downstream because longer in water (1) (3 × 1)	**3**
2(e)(i)	Hypotheses must be written as a statement or question and relate to characteristics of the river. NOTE: pebble size or gradient = 0 in **(i)** and **(ii)** If no response here (X NR) credit in **(ii)** to 2 max if method clearly relates to an appropriate hypothesis. Appropriate examples: *River velocity increases downstream* (1) *Does river velocity vary across the channel*? (1) *Channel width increases downstream (1)* *Does channel depth increase downstream?* (1) Inappropriate examples: *Temperature decreases downstream* *Does the river's salt content increase upstream*? *Pollution increases downstream*	**1**

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Question	Answer	Marks
2(e)(ii)	Will depend on Hypothesis chosen in **2(e)(i)**. IF inappropriate choice or not stated as a hypothesis 2 MAX for method. **Example 1 – method to measure channel width** One student / pole on each bank / side of river (1) Place measuring tape across channel / from one bank to the other (1) Keep tape taut / stretched (1) Poles must be directly across / at 90 degrees to banks (1) Repeat at different sites and calculate average width (1) Record measurement at each site (1) **Example 2 – method of measuring velocity using floats** Put poles / sticks 10 metres or fixed distance along river (1) Use tape measure to measure distance (1) Put float / orange in river at start of distance (1) Start stopwatch / timer when float released at start point (1) Measure time taken for float to travel between poles (1) Stop stopwatch / timer when float passes end point (1) Repeat at different points and calculate average speed (1) Record results from each site (1) **Example 3 – method of measuring velocity using flowmeter** Put meter / propeller / flowmeter below surface of water / into water (1) Propeller must face upstream (1) No obstacles in front of propeller (1) Read / look at digital reading / display to see speed (1) Take several / repeat readings and calculate average speed (1) Repeat at different points and calculate average speed (1) Record results from each site (1) (4 × 1)	**4**

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