Cambridge Assessment International Education

Cambridge O Level

GEOGRAPHY **2230/02**

Paper 2 Geographical Skills **October/November 2023**

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 2023 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

PUBLISHED

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.

2230/02 (Geographical Skills) – Specific Marking Instructions

Examiners must use the following annotations:

Annotation	Meaning	Use
	Correct point	All questions
	Incorrect	All questions
	Reserve mark	All questions
	Just	All questions
	Omission or further development/detail needed to gain credit	All questions
	Unclear or validity is doubted	All questions
	Repetition	All questions
	Benefit of doubt	All questions
	Too vague	All questions
	Material that does not answer the question	All questions

SEEN	1. Diagram has been seen but no specific credit given 2. Additional page has been checked	1. Any diagrams 2. All blank pages in the provided generic answer booklet and/or extension answer booklet(s).
 **d**	Accurate data mark	All questions

Section A: Mapwork skills

Question	Answer	Marks	Guidance
1(a)(i)	**State the leisure activity named in grid square 8700.** Surfing Walking (coastal path)	**1**	
1(a)(ii)	**If you start at the Gupton Burrows car park at 886994 and walk along the Pembrokeshire Coast Path until Black Cave at 870008, how far would you walk? Tick (✓) the correct answer.** 2–4km	**1**	
1(a)(iii)	**In which general direction would you walk from the Gupton Burrows car park across the beach towards Gravel Bay?** NW/NNW	**1**	
1(a)(iv)	**What type of vegetation is found in the sand dunes near Gupton Burrows car park?** Bracken, heath or rough grassland / Bracken	**1**	**= 0** Heath Rough grassland
1(b)(i)	**Use the map extract and Fig. 1.1 to describe the settlement of Angle.** Linear / elongated Along / beside a road Low lying / <15 m / gentle slope A village Has castle / tower / church / place of worship / public telephone/ public toilets / campsite / caravan site	**2**	**= 0** Houses Near beach / coast Near road / connected to road Surrounded by forestry, greeneries, grass Nucleated / dispersed Flat land **= 2** Linear, along the road

Question	Answer	Marks	Guidance
1(b)(ii)	**State <u>two</u> pieces of map evidence to show that the settlement of Angle and its surrounding area is a tourist destination.** Camp site / caravan site Public toilets Public telephone Chapel Bay / Angle Bay Castle Dovecote Tower (historical feature) Recreational route	**2**	**= 0** Beach Place of worship Church with tower Castle Farm School Historical features (on its own)
1(b)(iii)	**Use the map extract to describe the <u>natural</u> features of the coastline from Angle Point (grid square 8703) to Sawdern Point (grid square 8803).** Headlands Bay Mud / shingle / sand (Rock) outcrops / wave cut platform Cliffs Marsh / reeds	**3**	**Allow** Angle Bay **= 0** Scree Loose rock / rocks / boulders Stacks / stumps Ridge C shape Sea / river Scrub Sand pit / beach
1(c)(i)	**Identify feature X.** Mast	**1**	
1(c)(ii)	**Give a six-figure grid reference for the triangulation pillar at Y.** 924(5)014(5)	**1**	

Question	Answer	Marks	Guidance
1(c)(iii)	**Use the map extract to describe the relief of the land in grid square 9201.** 30 to >70 m (above sea level) Highest point 73 m Hill / hilly Gentle slopes / moderate slopes / sloping / steeper in N / convex slopes There is a valley	**2**	**Need units (m)** **Allow** Green Hill 30/40 to 70/73 m **= 0** Green Hill Reservoir Mountain About 50 m ((range needed) Lowland Plateau
1(d)(i)	**Study the oil refinery which has its centre in grid square 9003. How does the oil arrive at the refinery?** By pipeline / jetties / ship / shipping / sea	**1**	**= 0** Water Road

Question	Answer	Marks	Guidance
1(d)(ii)	**Study grid square 9302, which shows a power station. Explain why this area is a good location for a power station.** Flat land… (easy) to build on Lots of space / large area… room to expand / power station very large / for storage / for construction Near oil refinery… for raw material / source of fuel Near water… for power generation / cooling Near road… for transport of workers Away from settlements… for safety / avoid pollution or e.g. / disturbance Near jetty… for raw material / source of fuel	**4**	**Only credit explanations** e.g. Room for expansion Water for cooling **= 0** Near settlements Water for cleaning Road for transport of finished product (electricity) River for water supply **No double credit** Source of fuel / construction

Section B: Geographical skills

Question	Answer	Marks	Guidance
2(a)(i)	**<u>On Fig. 2.1, complete the line graph</u> using the data below.** **year** | 2017 | 2018 | 2019 **crude oil production (thousands of barrels per day)** | 101 | 100 | 110 **1 mark** for correctly plotting points **1 mark** for joining the points	**2**	

Question	Answer	Marks	Guidance
2(a)(ii)	**In which year was crude oil production at its highest?** 2010	**1**	
2(a)(iii)	**Between which <u>two</u> years did crude oil production change the most?** 2012–2013	**1**	
2(a)(iv)	**What is the overall trend shown in Fig. 2.1?** Decrease / decline / goes down / downwards	**1**	**= 0** Negative

Question	Answer	Marks	Guidance
2(b)(i)	**Using <u>only</u> information from Fig. 2.2, describe the route from Bukit Patoi Recreational Park in Temburong across the bridge to Bandar Seri Begawan. You should refer to distances and directions in your answer.** <u>From Bukit Patoi Recreational Park [BPRP]</u> Travel NW / NNW / through Labu Forest Reserve 12 000 m / 12 km Then travel NW / WNW / across Brunei Bay / Temburong Bridge 14 000 m / 14 km Then travel SW / along Jalan Kota Batu / follow the coastline 9000 m / 9 km Then turn N 4000 m / 4 km (To reach Bandar Seri Begawan /BSB) <u>Overall:</u> Total distance 37–41km = 1 mark Travel NW from BPRP to BSB OR Travel NW, then SW then N = 1 mark	3	**RESERVE** [use ✓d] **1 mark** for distance **1 mark** for direction (only credit NW once) **= 0** Across the bridge (in question stem) Left / right **Allow** Tolerance + or - 1km Any combination from 12+14+9+4 km e.g. BPRP to far side of bridge 25–27 km e.g. far side of bridge to BSB 12–14 km **Allow** Route in reverse

Question	Answer	Marks	Guidance
2(b)(ii)	**Why is the Temburong Bridge so important for the development of Brunei?** <u>Temburong isolated</u> Temburong is geographically isolated / remote / separated from the rest of Brunei / bridge now connects Temburong with Brunei-Muara / BSB / rest of Brunei / it will help Temburong develop Malaysia / Limbang / Sarawak is between Brunei-Muara and Temburong <u>Commuters</u> Many residents of Temburong commute daily to the capital / easier to commute / easier to work in BSB <u>Time</u> Shorter travel time / 30-minute journey time / do not have to use a boat / was 45-minute boat ride / was two-hour drive overland / short cut <u>Borders</u> Old route passed through four immigration checkpoints / no longer have to cross a border / pass through another country / can now bypass Malaysia <u>Less congestion</u> Old route frequently congested <u>Goods and trade</u> Facilitates flow of raw materials/goods / reduces cost of transporting goods / increases trade <u>Tourism</u> More accessible for tourists / increases flow of tourists / easier to visit Forest Reserve or Recreational Park / Temburong is a tourist destination	**2**	Headings are the ideas to look for (do not credit) **= 0** Easier (on its own) Economy improves Increases wealth Helps Brunei develop Improves accessibility (on its own) Bridge is a tourist attraction **NB** Tourists can be to Temburong or from Malaysia to Brunei

Question	Answer	Marks	Guidance
3(a)	**Use Fig. 3.1 to describe the location of the tropical rainforest in South America.** North / northern half (of South America / continent) Along Equator / near Equator / either side of the Equator North of Tropic of Capricorn / most between Tropic of Capricorn and Equator Between 10°N and 30°S / most between 10°N and 10–18°S Between 81–80°W and 35°W / mostly 78°W and 45°W Along/near/at NW coast / east coast / South/North Atlantic Ocean	**2**	**= 0** Above Edge of Tropic of Cancer Amazonia South Pacific Ocean Sea Ocean Coastline (on its own)

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>3(b)</td><td>Describe how the amount of deforestation changed between 2004 and 2020. Use data from Fig. 3.2 to support your answer.

<u>Overall</u>
Decrease / decline
from 28 000 km^2 to 11 000 km^2
by 17 000 km^2

<u>Decrease</u>
2004 to 2012 (or dates within)
from 28 000 km^2 in 2004 to 4500 km^2 in 2012 / by 23 500 km^2
See data table

<u>Increase</u>
2012 to 2020 (or dates within)
from 4500 km^2 in 2012 to 11 000 km^2 in 2020 / by 7500 km^2
See data table

<u>Fluctuates</u>
Overall / 2012–2020 (or dates within)</td><td>4</td><td>Reserve 1 mark for data. [use ✓d]
Must have units km^2

Credit max. 1 decrease within the years 2004 to 2012
Credit max. 1 increase within 2012 to 2020

= 0
Increase 2008
Decrease 2014 / 2017
Highest and lowest

<u>Year by year approach allow</u>
Start and end data = overall change

<table>
<tr><th>year</th><th>amount (km^2)</th><th>year</th><th>amount (km^2)</th></tr>
<tr><td>2004</td><td>28 000</td><td>2013</td><td>6000</td></tr>
<tr><td>2005</td><td>19 000</td><td>2014</td><td>5000</td></tr>
<tr><td>2006</td><td>15 500</td><td>2015</td><td>6000</td></tr>
<tr><td>2007</td><td>11 500</td><td>2016</td><td>8000</td></tr>
<tr><td>2008</td><td>13 000</td><td>2017</td><td>7000</td></tr>
<tr><td>2009</td><td>7500</td><td>2018</td><td>7500</td></tr>
<tr><td>2010</td><td>7000</td><td>2019</td><td>10 000</td></tr>
<tr><td>2011</td><td>6500</td><td>2020</td><td>11 000</td></tr>
<tr><td>2012</td><td>4500</td><td></td><td></td></tr>
</table>
</td></tr>
</table>

Question	Answer	Marks	Guidance
3(c)(i)	**Use the information in the key to <u>complete Fig. 3.3</u>.** **1 mark** for accurate line at 85% **1 mark** for accurate shading: Horizontal lines small-scale agriculture 20% Grey shading large-scale agriculture 10%	**2**	Do not allow plot at 75% but credit neat, accurate shading.
3(c)(ii)	**What is the main reason for deforestation in the Amazon rainforest shown in Fig. 3.3?** Cattle ranching	**1**	
3(c)(iii)	**State <u>one</u> reason why tropical rainforests are a valuable resource that needs to be conserved.** <u>Reasons such as</u> Timber Food, e.g. nuts Medicine, e.g. rosy periwinkle Tourism Home to indigenous tribes, e.g. Yanomami Reduce soil erosion Reduce flooding Act as 'green lungs' of the earth / absorb carbon dioxide / absorb greenhouse gases / replenish oxygen Regulating climate / creating rainfall / moderating temperatures / helps prevent global warming Habitat, e.g. jaguar Exotic plants and animals / biodiversity Hydrological cycle, e.g. water store, interception, evapotranspiration Other	**1**	

Section C: Geographical investigation

Question	Answer	Marks	Guidance
4(a)(i)	**Name <u>one</u> suitable type of graph to present this data.** Line graph Bar chart / bar graph / histogram	**1**	**= 0** Scatter graph
4(a)(ii)	**In 2019 Dubai had a total population under 4 million people and there were 84 million visits to the mall. Based on this information the students decided to test <u>Hypothesis 1:</u> *Most people using the Dubai Mall will be tourists in Dubai*.** **Explain why the students expected this hypothesis to be accepted.** The number of visits to the mall (84 million) is much greater than the number of residents / total population of Dubai (4 million). Every person in Dubai would have to go to the mall many times. There are 80 million more visits to the mall than there is population in Dubai.	**1**	**= 0** The number of visits to the mall, 84 million, is more than the 4 million population of Dubai.
4(b)(i)	**The students used a sampling method of asking every tenth person they met to complete the questionnaire. What is this method of sampling called?** Systematic	**1**	
4(b)(ii)	**Give <u>one</u> advantage of this method of sampling.** Will not be biased / will be reliable / fair / objective Gives a representative sample of people Do not need random numbers table Do not need knowledge of population to be sampled	**1**	**= 0** Accurate Easy Saves time Simple to use Quick method

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>4(b)(iii)</td><td>Suggest <u>two</u> pieces of advice the students' teacher gave them about using the questionnaire in the mall.

Work in pairs / small groups / not alone / do not work in large groups
Do not block entrance to shops / pavements / avoid escalators
Introduce or explain the purpose
Be polite / kind / respectful / say thank you / do not cause offence
Accept that some people are too busy / in a hurry / do not persist
Choose a time when there are plenty of people at the mall
Ask people in different locations / groups spread out
Each group should have a mobile phone / emergency contact details</td><td>2</td><td>= 0
Ask every 10th person
Introduce self

Allow
Do not force people (= do not persist)</td></tr>
<tr><td>4(c)(i)</td><td><u>Plot the information below on Fig. 4.3.</u>

<table><tr><th colspan="2">1. Are you a resident of Dubai or a tourist?</th></tr><tr><td>resident</td><td>41%</td></tr><tr><td>tourist</td><td>59%</td></tr></table>
1 mark for line in correct place at 41%
1 mark for neat accurate shading:
Diagonal lines resident 41%
Grey shading tourist 59%</td><td>2</td><td>Line must be drawn between the lines for 40% and 42%.</td></tr>
</table>

Question	Answer	Marks	Guidance
4(c)(ii)	**What conclusion would the students make for <u>Hypothesis 1:</u> *Most people using the Dubai Mall will be tourists in Dubai*? Support your answer with evidence from Table 4.1 and Fig. 4.3.** <u>Conclusion</u> True / correct / confirmed / accurate / agree… <u>Evidence</u> Fig. 4.3 shows that 59% are tourists / there are more tourists than residents / ratio of tourists to residents is approximately 6:4 / 18% more tourists than residents Table 4.1: there are many more visits than the total population	**2**	**Reserve 1 mark** for conclusion. **= 0** Yes (on its own) No credit for hypothesis is false / incorrect. If no conclusion credit evidence.
4(d)(i)	**Is the data in Table 4.2 primary <u>or</u> secondary? Explain your answer.** Secondary Information that someone else has collected and made available / not firsthand / students did not actually visit the Mall to collect the data / collected by third party	**2**	**= 0** Internet
4(d)(ii)	**What is the most common type of land use in the Dubai Mall shown in Table 4.2?** Shops / shopping	**1**	
4(e)(i)	**What is the most popular reason for visiting the Dubai Mall shown in Fig. 4.4?** Food	**1**	

Question	Answer	Marks	Guidance
4(e)(ii)	**Do the results support <u>Hypothesis 2:</u> *The main function of the Dubai Mall is shopping*? Support your conclusion with evidence from Table 4.2 and Fig. 4.4.** **THREE possible conclusions acceptable:** **EITHER** <u>Conclusion</u> False / incorrect / not proven / not accurate / disagree / rejected… = 1 <u>Evidence</u> Fig. 4.4 shows more / most people come to the mall for food = 1 Fig. 4.4 shows 28/29% for shopping and 34/35% for food / only 28/29% came to the mall for shopping = 1 **OR** <u>Conclusion</u> Partly false / partly true = 1 <u>Evidence</u> Table 4.2 shows shops 1200+ / by far the greatest number / the most common type of land use is shops / more shops than restaurants and cafes, hotels and entertainment / 1200+ shops, only 120+ restaurants and cafes = 1 Fig. 4.4 shows more / most people come to the mall for food / only 28/29% came to the mall for shopping / 28/29% for shopping and 34/35% for food = 1	**3**	**Reserve 1 mark** for conclusion. **Reserve 1 mark** for evidence. If no conclusion credit evidence. Evidence must match the conclusion. **= 0** Yes/no on its own <u>False</u> Conclusion = 1 mark Argument for = 1 mark Data = 1 mark [use ✓d] **NB** 5–7% more for food than shopping = 2 <u>Partially true/false</u> Conclusion = 1 mark Argument for = 1 mark Argument against = 1 mark **NB Reserve 1 mark** for data, can be a % or 1200+ shops [use ✓d]

Question	Answer	Marks	Guidance
4(e)(ii)	**OR** Conclusion True / correct / proven / accurate / agree / accepted = 1 Evidence Table 4.2 shows shops 1200+ / by far the greatest number / the most common type of land use / more shops than restaurants and cafes, hotels and entertainment = 1		True Conclusion = 1 mark Argument for = 1 mark **NB** Max. 2 marks
4(f)(i)	**Suggest one hypothesis you could test for Question 3: *What method of transport did you use to get to the Dubai Mall?*** Responses such as Car / bus / metro / taxi / tram / walk is the most popular method of transport. Car / bus / metro / taxi / tram / walk is the most common way to travel. Most people get to the Dubai Mall by car / bus / metro / taxi / tram / walk, etc.	**1**	**Hypothesis must be a statement** and relate to a method of transport given on the questionnaire, i.e. bus, car, metro, taxi, tram or walk. **= 0** A question, e.g. Is car the most popular method of transport?
4(f)(ii)	**The students conducted a total of 336 questionnaires. Explain how this helped to make their data collection reliable.** Reduces bias Makes results more precise/accurate / less likely to be due to chance / negates anomalies Is more representative of the population / a good cross-section / wide range of people, e.g. country of origin It should show a large number of results from both residents and tourists Makes it possible to identify less popular options / to get a wide range of answers, e.g. 7% for Burj Khalifa, 7% for fountain show	**2**	**= 0** Reliable Trustworthy Fair Valid Can find averages Easy to compare Many people Many answers Large sample **BOD** Many different people