Cambridge Assessment International Education

Cambridge O Level

GEOGRAPHY **2230/02**

Paper 2 Geographical Skills **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.

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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.

Question	Answer	Marks	Guidance
1(a)(i)	**Name the airport in grid square 6325.** Bømoen	**1**	
1(a)(ii)	**Suggest <u>two</u> reasons why this is a good location for an airport.** Flat land Enough space / large open space / large area Near Voss / city / big settlement Near road	**2**	= 0 Power supply No trees Near hang gliding Near hotel Not near housing / far from settlement Near railway Accessible / good transportation
1(b)(i)	**Identify <u>two</u> tourist facilities in Voss (grid squares 5823 and 5824).** (Tourist) Information Cultural monument Hotel / lodging Camp site Museum Railway station Swimming (pool)	**2**	

Question	Answer	Marks	Guidance
1(b)(ii)	**<u>Complete the table below</u> by drawing an arrow between the tourist activity and the correct map location. One has been completed for you.** **activity** → **map location** downhill skiing → 5726 fishing → 5923 rafting → 5725 cycling → 6325 hang gliding → 6224	**4**	
1(b)(iii)	**Give a six-figure grid reference for the picnic area on the shore of Lake Vangsvatnet.** 563/4 231/2	**1**	
1(c)(i)	**State the total area covered by the grid squares in Fig. 1.1. Give your answer in square kilometres (km^2).** 4 (km^2)	**1**	
1(c)(ii)	**How do skiers travel from Voss to the café at 578253?** Ski lift / gondola lift	**1**	= 0 Road on own Illuminated ski trail
1(c)(iii)	**What is the straight-line distance from the trigonometric point at 562266 to the trigonometric point at 579261? Give your answer in kilometres.** 1.8 (km)	**1**	Allow 1.75 to 1.85

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>1(c)(iv)</td><td>What compass direction is the trigonometric point at 562266 from the trigonometric point at 579261?

NW / WNW</td><td>1</td><td></td></tr>
<tr><td>1(c)(v)</td><td>Calculate the difference in height between the two trigonometric points in (iii) and (iv). The heights are shown in metres on this map extract.

40 m / 40 metres</td><td>1</td><td>Must have units of measurement</td></tr>
<tr><td>1(d)</td><td>Using the map extract, complete Table 1.1 to describe the following features:

Reserve 1 mark for each category.

<table>
<tr><th>feature</th><th>description</th></tr>
<tr><td>vegetation and land cover</td><td>Forest / group(s) of trees
Marsh
Cultivated area</td></tr>
<tr><td>relief</td><td>Hill / mountain / hilly
Steep slopes
Highest point 654 m
c300 m to c600 m above sea level
Conical shape
Plateau (on top of hill)
Concave slopes</td></tr>
<tr><td>drainage</td><td>Stream(s) / surface drainage / river(s)
Radial drainage
Marsh</td></tr>
</table></td><td>5</td><td>Must answer in correct place

Only allow marsh × 1 mark

= 0
Glacier

= 0
Gentle slopes</td></tr>
</table>

Question	Answer	Marks	Guidance
2(a)	**Using Fig. 2.1, describe the distribution of industrial sites in Brunei.** Coastal All in the north Mostly / 5 in Brunei-Muara district Mostly clustered / quite near to each other / not large distances apart Linear pattern 2 in Tutong district / 1 in Belait / 1 in Temburong district / at least one in every district / list of industries or sites found in each district	**3**	
2(b)	**Describe the site and situation of the Brunei Methanol Company (BMC) shown in Fig. 2.2.** Reserve 1 for site and 1 for situation <u>Site:</u> Large Flat Landscaped / trees / green spaces <u>Situation:</u> Near sea / beach / water / coast Next to pier / jetty / pipeline Near to roads Near to / far from housing / town	**3**	Must be seen in Fig. 2.2 = 0 Open space Allow river / lake

Question	Answer	Marks	Guidance
2(c)	**Using Fig. 2.1, Fig. 2.2 (Insert) and Table 2.1, explain why the Sungai Liang Industrial Park is a good location for the Brunei Methanol Company (BMC).** Near sea / coast to get raw materials / natural gas Near coast / coast to export (to Asia, India and USA) / to send products to market Large area / space for expansion / construction Flat land for ease of construction Near town / named town* / housing for workers OR Away from housing so locals not affected by noise, accidents Industrial Park so infrastructure already there – roads, water, electricity Near roads for workers	**3**	Allow named town Liang, Telisai, Tutong, Seria, Panaga, Kuala Belait = 0 Near water for cooling / processing Near roads for raw materials / market
2(d)	**State one reason why Brunei needs to diversify its economy.** Oil finite / running out Economic slump (oil price since 2014) Too reliant on oil industry	**1**	= 0 Make money

Question	Answer	Marks	Guidance
3(a)(i)	**Complete the graph on Fig. 3.1 above using the data below.** 1 mark for each bar correctly plotted: The Philippines 38% Thailand 25%	**2**	No marks for shading
3(a)(ii)	**Which country shown in Fig. 3.1 has more than half of its urban population living in informal settlements?** Cambodia	**1**	

Question	Answer	Marks	Guidance
3(b)	**Describe the housing shown in Fig. 3.2.** Houses Small houses Crowded together / tightly packed / little space between / compact Houses poorly built / poor quality / unstable / unsafe Unplanned / haphazard Near / on water / river / on stilts Single / two storey / different heights Materials Made from scrap material / wood / tin / (blue) plastic sheeting Roofs Sloping / tiled / corrugated tin / zinc Windows Tiny windows /openings / holes in walls	**3**	= 0 Cardboard Dirty
3(c)	**Describe the change in the urban population in Indonesia between 2000 and 2018.** Increased From 42% to 55% By 13%	**2**	Must have % Allow 14% = 0 (too vague) From <1/2 to >1/2 / from 2/5 to >1/2

Question	Answer	Marks	Guidance
3(d)	**State <u>two</u> problems, other than the growth of informal settlements, that are caused by urban growth.** Unemployment / increased competition for jobs Crime Poor living conditions / conditions unhygienic / increased likelihood of disease spreading / overcrowding Lack of education / medical / police Transport problems / traffic congestion Urban sprawl / deforestation Air / water / land pollution Increase urban temperature Shortage of proper facilities / services, e.g. sanitation, electricity, clean water	**2**	= 0 Lack of housing Poverty Lack of food / resources / overpopulation Competition for land (too vague) Lack of services (too vague) Do not allow problems in rural areas, e.g. gender imbalance

Question	Answer	Marks	Guidance
4(a)(i)	**To investigate their hypotheses the students had to first decide where the centre of the CBD was. Suggest <u>two</u> features they could use to identify the central point of the CBD.** Bus station / railway station High traffic and pedestrian flows Peak land value point / highest land value Cultural / historic buildings, e.g. mosque / museums / monuments Town hall / government buildings Tall / multi-storey buildings / multi storey car parks High density buildings / lack of open space Shopping malls / department stores / shopping precincts Offices / business sector Old / historical / modern / redevelopment Entertainments, e.g. theatres	**2**	= 0 No houses More roads More buildings Lot of shops / retail Hotels Library Tourist facilities
4(a)(ii)	**What is the name of the sampling method they used?** Systematic	**1**	
4(a)(iii)	**Suggest <u>two</u> advantages of doing a pilot study.** Practise / improve methodology / know what to do / familiarity with gathering data practices and using appropriate pieces of equipment Practice working together Be aware of safety precautions Allow development marks, e.g. Test all types of transport are included How to tally Check consistency of counting / using a 'clicker' Practise timing using a stop watch / timer on phone	**2**	Allow 1 mark for general comment on practising data collection and equipment use = 0 Save time

Question	Answer	Marks	Guidance
4(b)(i)	**Use the data in Table 4.1 (Insert) to <u>complete the bar graph for Site 8 on Fig. 4.2 below</u>.** 2 marks if <u>all</u> segments are accurately plotted 1 mark if some segments are correctly plotted / total is correct 1 mark for correct shading Cars 19 Lorries 1 2 wheels 4 Buses 3 Vans / minibuses 2 Taxis 0 **Total 29**	**3**	
4(b)(ii)	**What conclusion might the students make for Hypothesis 1: *The amount of traffic decreases away from the centre of the CBD*? Support your answer with data from Table 4.1 (Insert) and Fig. 4.2.** Hypothesis is accepted / confirmed / supported / valid (1 mark reserve) The amount of traffic does go down from the CBD to the edge of town / there is more traffic at Site 1 than Site 12 <u>Strong support</u> (detailed, accurate comparison): Average 43/44 at Site 1 / CBD <u>and</u> less / lower average 18/19 at Site 12 / edge of town = 2 marks <u>Weak support</u> (one piece of data, lack of comparison, lack of site info.): The CBD is the highest at 44 / it goes down from >40 to <20 / it decreased from 44 to 19	**3**	Allow true / proved / correct Do not credit: Direct copy of hypothesis Data on types of traffic Data on times of count
4(b)(iii)	**Apart from the amount of traffic, Fig. 4.2 also shows the type of transport. What was the most common type of transport shown in Fig. 4.2?** Cars	**1**	

Question	Answer	Marks	Guidance
4(c)(i)	**In the space below, draw a recording sheet which the students could have used to do the pedestrian counts.** Reserve 1 mark for space to record data on sheet <u>Recording sheet should include:</u> Day / date / time of day / weather / name of recorder Length of count / direction of movement Street name / location / place / sample point / site Tally of pedestrians / space to do tally Total number / result of tally / average of count	**3**	
4(c)(ii)	**Complete the bar graph for Site 8 on Fig. 4.3 below, using the results in Table 4.2 (Insert).** 1 mark for both bars correctly drawn 1 mark for accurate shading Second count (10:15) – 9 pedestrians Third count (11:15) – 13 pedestrians	**2**	

Question	Answer	Marks	Guidance
4(c)(iii)	**The students decided that Hypothesis 2: *Pedestrian numbers decrease away from the centre of the CBD* was accepted. Use evidence from Table 4.2 (Insert) and Fig. 4.3 to support this decision.** Pedestrian flow goes down from Site 1 to Site 12 / Fig. 4.3 or Table 4.2 show that the number of pedestrians is less as distance from the CBD increases. Strong support (detailed, accurate comparison) Average of 37 or total of 111 at Site 1 / CBD and only / lower average of 16 or total of 48 at site 12 / edge of town = 2 marks Weak support (one piece of data, lack of comparison, lack of site info.) It is lower / only 16 at site 12 However (reference to any anomaly) Site 8 is lower than Site 12	**3**	Do not credit direct copy of hypothesis To score 3 marks candidate can earn: 1 for general trend + 2 for accurate data As part of accepting the hypothesis the students might have considered any anomalies.