



# Cambridge O Level

---

**GEOGRAPHY**

**2230/01**

Paper 1 Geographical Themes

**October/November 2022**

**MARK SCHEME**

Maximum Mark: 75

---

**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 2022 series for most Cambridge IGCSE™, Cambridge International A and AS Level components and some Cambridge O Level components.

---

This document consists of **29** printed pages.

**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.

**2230/01 (Geographical Themes) – Specific Marking Instructions**

Examiners must use the following annotations:

Annotation	Meaning	Use
	Correct point	Point-marked questions only
	Incorrect	Point-marked questions only
<b>RES</b>	Reserve mark	Point-marked questions only
<b>J</b>	Just	Point-marked questions only
<b>L3</b>	Level 3	Levels-marked (7-mark) questions only
<b>L2</b>	Level 2	Levels-marked (7-mark) questions only
<b>L1</b>	Level 1	Levels-marked (7-mark) questions only
<b>0</b>	Level 0 – No creditable response	Levels-marked (7-mark) questions only
<b>Highlight</b>	Creditworthy part of an extended response	Levels-marked (7-mark) questions only
	Highlighting a significant part of an extended response – to be used with another annotation e.g. <b>IRRL</b> or <b>EVAL</b>	Levels-marked (7-mark) questions only
<b>EVAL</b>	Evaluative point	Levels-marked (7-mark) questions only

Annotation	Meaning	Use
	Omission or further development/detail needed to gain credit	All questions
	Unclear or validity is doubted	All questions
	Repetition	All questions
	Developed point	All questions
	Appropriate example or case study	All questions
	Benefit of doubt	All questions
	Too vague	All questions
	Irrelevant	All questions
	Material that does not answer the question	All questions
	<ol style="list-style-type: none"> <li>Diagram or essay plan has been seen but no specific credit given</li> <li>Additional page has been checked</li> </ol>	<ol style="list-style-type: none"> <li>Any diagrams or essay plans</li> <li>All blank pages in the provided generic answer booklet and/or extension answer booklet(s).</li> </ol>
	Rubric error	Place at start of question not being credited

**2230/01 (Geographical Themes) – Levels of Response Marking**

Using the principle of 'best-fit' and the level descriptors:

- decide which level best describes the overall quality of the response
- annotate the script at the end of the response with the level annotation
- award a mark for the relative position of the response within that level

Level	Marks	Descriptors
<b>Level 3</b> <span style="border: 1px solid red; padding: 2px;">L3</span>	<b>6–7</b>	Responses at this level: <ul style="list-style-type: none"> <li>• demonstrate a good knowledge and understanding of the content</li> <li>• use detailed example(s) which are relevant and integrated effectively</li> <li>• make a clear argument using well-reasoned judgements</li> <li>• provide a clear conclusion / decision</li> </ul>
<b>Level 2</b> <span style="border: 1px solid red; padding: 2px;">L2</span>	<b>3–5</b>	Responses at this level: <ul style="list-style-type: none"> <li>• demonstrate a sound knowledge and understanding of the content</li> <li>• use example(s) which are relevant and have some detail</li> <li>• make an argument using some reasoned judgements</li> <li>• provide a basic conclusion / decision</li> </ul>
<b>Level 1</b> <span style="border: 1px solid red; padding: 2px;">L1</span>	<b>1–2</b>	Responses at this level: <ul style="list-style-type: none"> <li>• demonstrate a basic knowledge and understanding of the content</li> <li>• use example(s) which are generic or in name only</li> <li>• make an attempt at a basic argument</li> <li>• provide a yes / no statement</li> </ul>
<b>Level 0</b> <span style="border: 1px solid red; padding: 2px;">0</span>	<b>0</b>	No creditable response

**Theme 1: Population and settlement**

Answer **one** question from this theme.

**EITHER**

Question	Answer	Marks	Guidance
1(a)(i)	<b>Define the <i>site of a settlement</i> and the <i>situation of a settlement</i>.</b>  Site is the land/place on which a settlement is built Situation is the location of a settlement in relation to its surroundings	<b>2</b>	1 mark for each description
1(a)(ii)	<b>From Fig. 1.1, identify the <u>two</u> economic factors.</b>  Links to other settlements Communications	<b>2</b>	
1(a)(iii)	<b>Explain the advantages and disadvantages of building close to a river when developing early settlements.</b>  <u>Advantages</u> Located within a meander can provide defence Water supply/for cooking/cleaning clothes/washing Irrigation/agriculture/alluvium Fish/fishing Port can develop where the river meets the sea Transport  <u>Disadvantages (Reserve)</u> Flooding Difficulty crossing the river/bridges are needed Water pollution/unclean water/disease from water/mosquitoes Danger of drowning/alligators	<b>4</b>	Reserve 1 for disadvantages  Industrial waste = 0 Agricultural waste = 0 Food supply = 0

Question	Answer	Marks	Guidance
1(b)	<p><b>Compare the housing in Zone A and Zone B and explain how it shows differences in wealth in the city.</b></p> <p><u>Zone A</u>  Tall blocks of flats/apartments  Better/stronger building materials/concrete/steel  More planned buildings  White/grey/different colours  Better water supply/sanitation/electricity  Buildings more spaced out/space between buildings/greenery</p> <p><u>Zone B</u>  Fewer storeys/lower/shorter  Recycled building materials/wood/bricks  Lack of planning/building built without a plan/haphazard  Brown/red/yellow/colourful  Less water supply/sanitation/electricity  Housing closer together/less greenery</p> <p><u>Explanation</u>  Zone A is more expensive housing/apartments or Zone B is less expensive housing/cheaper rents/informal settlement  Zone A is not affordable for many/Zone B is more affordable</p>	6	<p>Need to compare Zone A and Zone B rather than individual points from each zone – however, this can be matched up by the examiner.  Reserve 1 for explanation</p> <p>Big/small (needs to link to height and not housing size) = 0  Densely populated (in both locations) = 0  Overcrowded (people) = 0  Painted/not painted = 0  Windows/verandas/balconies = 0</p>
1(c)(i)	<p><b>Name the continent which is expected to have the greatest increase in the percentage of population in urban areas between 1950 and 2030.</b></p> <p>South America</p>	1	



Question	Answer	Marks	Guidance
1(c)(ii)	<p><b>State the percentage increase for the continent you named in <u>(i)</u>.</b></p> <p>42 (%)</p>	<b>1</b>	<p>No tolerance Can accept answer without %</p> <p>If answer in 1(c)(i) is incorrect, credit is given for appropriate % increase here:</p> <ul style="list-style-type: none"> <li>• Africa = 36%</li> <li>• Asia = 37%</li> <li>• Europe = 27%</li> <li>• North America = 23%</li> </ul>
1(d)(i)	<p><b>Define the term <i>counter-urbanisation</i>.</b></p> <p>Process whereby people move out of the cities To live in rural areas/countryside/smaller villages</p>	<b>2</b>	<p>Urban to rural = 1</p> <p>Urban sprawl = 0</p>

Question	Answer	Marks	Guidance
1(d)(ii)	<p><b>With reference to examples, describe the reasons for counter-urbanisation and evaluate its effects.</b></p> <p><b>Content Guide</b></p> <p><u>Answers are likely to refer to:</u></p> <p>Decline in urban areas (push factors)          Attractiveness of rural areas (pull factors)          Greater wealth          Improvements in communications/technology          Urban areas suffer from decline          Those who cannot afford to move out are left behind          Second home owners do not take part in rural life          House prices are higher</p> <p><u>More developed answers are likely to refer to:</u></p> <p>High rents have pushed shops, industries and residents out of the city and unemployment, crime and poverty in inner cities have made people feel unsafe living there.          Poor housing conditions in inner city areas as many houses were built during the Industrial Revolution.          Traffic congestion and environmental issues such as air, water and noise pollution.          People are attracted to rural areas with lower house prices, bigger houses and gardens.          Increased wealth enables car ownership which increases the mobility of people.          People find it easier to commute when there are high-speed rail links.          Improvements in communication technology, such as the Internet and email, allow people to work from home.</p>	7	<p>There must be reasons for why counter-urbanisation takes place and an evaluation of the effects of counter-urbanisation on the urban and rural area. Any named town/city.</p> <p><b>Levels marking</b></p> <p>Please ensure that you refer to the Levels of response marking section at the front of the mark scheme before marking this question.</p>

Question	Answer	Marks	Guidance
1(d)(ii)	<p>Cities can become smaller in size with the CBD and inner cities experiencing further decline or decay.</p> <p>Wealthy families move out and those who are left behind may be minority ethnic populations or immigrant populations, and this results in social divides that can escalate into conflict and violence.</p> <p>Villages take on the characteristics of suburban areas and lose their character and charm.</p> <p>New residential areas built at the edges of the villages can cause a divide between new and existing residents.</p> <p>Young people from rural areas are forced to move away from their local areas as they can no longer afford the higher house prices.</p>		

**OR**

Question	Answer	Marks	Guidance
2(a)(i)	<p><b>Define the term <i>agriculture</i>.</b></p> <p>Growing of crops/plants/land cultivation Rearing of animals/livestock</p>	<b>2</b>	Allow farming if no other detail = 1
2(a)(ii)	<p><b>Name the food product with the largest increase in percentage in self-sufficiency from 2017 to 2018.</b></p> <p>Goat</p>	<b>1</b>	
2(a)(iii)	<p><b>Calculate the number of food products in which Brunei was more than 50% self-sufficient in 2017, as shown in Fig. 2.1.</b></p> <p>4 (chicken, eggs, goat and vegetables)</p>	<b>1</b>	Question asks for number so 4 is correct – but mark awarded if all 4 food products are stated.

Question	Answer	Marks	Guidance
2(a)(iv)	<b>Describe strategies used to increase agricultural production in Brunei.</b>  Increase the knowledge/skills/training of farmers Use of fertilisers Pesticides/insecticides/pest control Machinery/modern technology Foreign investment Government incentives/subsidies/support Use of HYV crops Larger farming area Developing irrigation systems Advice/partnership with other countries Research and development	5	Allow development marks, e.g. <ul style="list-style-type: none"> <li>• Increase production in livestock/crop rotation</li> <li>• Develop skills in preparing plants for planting</li> <li>• Sembada 188 Rice Variety</li> </ul> More farmers = 0 Deforestation on its own = 0
2(b)(i)	<b>Describe the distribution of provinces with rice production of 25–999 tonnes (10 000) shown in Fig. 2.2.</b>  Uneven/scattered/many different parts Covers most of the country North/NE/NW Central area East coast/East China Sea SE/SW	3	South = 0 Along coast = 0 South China Sea = 0
2(b)(ii)	<b>Define <i>subsistence rice farming</i> and <i>commercial rice farming</i>.</b>  Subsistence rice farming is farming for family/own use Commercial rice farming is when rice is produced to sell	2	

Question	Answer	Marks	Guidance
2(b)(iii)	<p><b>Explain why rice farming is so important to people living in Southeast Asia.</b></p> <p>Food supply/staple diet A source of carbohydrates/protein and B vitamins Jobs/employment/seasonal work Income for farmers Cultural importance Rice can be farmed easily/suitable requirements to grow rice (temperature/type of soil/rainfall)</p>	<b>4</b>	Economy of country = 0

Question	Answer	Marks	Guidance
2(c)	<p><b>With reference to <u>one</u> rice farming area in Southeast Asia, describe how rice production methods have changed over time. How effective are management strategies used to increase rice production?</b></p> <p><b>Content Guide</b></p> <p><u>Answers are likely to refer to:</u></p> <p>More machinery More fertilisers Saves time for farmer Reduces labour costs Damage to the environment such as water pollution</p> <p><u>More developed answers are likely to refer to:</u></p> <p>There has been rapid mechanisation in rice farming where tractors are used for ploughing. Direct seeding is practised where farmers sow seeds directly onto the soil as this saves time and labour. Pesticides and herbicides, which are chemicals to kill weeds, are sprayed onto fields to reduce damage to rice crops. Much higher use of chemical fertilisers in the production of rice. Combine harvesters cut the plants and thresh to separate the grains from the plants. Machines are an effective method as there is a shortage of labour to work on the farms. Can reduce the costs of rice production as the cost of labour is high. Fertilisers result in a higher yield but can cause environmental damage to water sources if not applied correctly.</p>	7	<p>There must be reference to one rice farming area. It must be clear how rice production methods have changed. There also must be reference to the effectiveness of the management strategies used to increase rice production.</p> <p>Allow named examples where a rice is grown, e.g. Kedah Plain. Allow Brunei.</p> <p><b>Levels marking</b></p> <p>Please ensure that you refer to the Levels of response marking section at the front of the mark scheme before marking this question.</p>

**Theme 2: The natural environment**Answer **one** question from this theme.**EITHER**

Question	Answer	Marks	Guidance
3(a)(i)	<b>Name the part of the typhoon indicated by the arrow and describe the weather conditions in this part of the typhoon.</b>  Eye (Reserve) Lowest pressure area Very calm weather Clear skies Light/weak winds Dry/no rainfall	<b>4</b>	Reserve 1 mark for the eye of the storm  Not strong winds = 0
3(a)(ii)	<b>Using the information on Fig. 3.2, explain why Typhoon Haiyan has been described as one of the worst typhoons ever to hit The Philippines.</b>  4 million people have been left homeless 6 million unemployed 90% of buildings in the city of Tacloban destroyed/damaged Buildings destroyed so jobs are lost The possibility of a famine/hunger catastrophe No shelter from the cold/rain No money to buy food/clothing/medical supplies	<b>2</b>	1 mark for direct lifting of information 1 mark for a link/development

Question	Answer	Marks	Guidance
3(a)(iii)	<b>Suggest management strategies that could be used to reduce the impact of a typhoon.</b>  Monitoring/predicting/tracking of typhoon Advance warnings Evacuation of people Education about what to do/practice drills Shelters provided Emergency supplies of clean water/food/clothing/blankets Help from international organisations/charities/governments CERT/community emergency rescue teams Strengthening houses/stronger building materials Houses built on stilts to reduce impact of storm surges Sea walls Afforestation/planting trees	<b>5</b>	
3(b)(i)	<b>Describe the distribution of tropical rainforests shown in Fig. 3.3.</b>  Along/near/on the equator Between the tropics Mostly between 10°N and S of the equator Amazon Basin/Congo (Zaire) Basin/Southeast Asia/North of South America	<b>3</b>	Above/below equator = 0 Country = 0



Question	Answer	Marks	Guidance
3(b)(ii)	<p><b>Explain how tropical rainforest plants have adapted to the rainforest environment.</b></p> <p>Leaves are evergreen – high annual temperatures and rainfall  Drip tips/waxy leaves – water to drain off easily/preventing trapped water that may encourage bacteria to grow on them  Branches high up – reach for sunlight  Barks are smooth and thin – temperatures remain constant throughout the year  Wide/shallow roots – maximise their access to water/nutrients found on the surface of the forest soil  Buttress roots – provide support for the trees  Plants flower/bear fruit all year – high temperatures and rainfall  Lianas – wind around the trunks/branches of tall trees to reach for sunlight  Epiphytes – plants that grow on the trunks/branches of other tall trees to be closer to the sunlight  Tall trunks/trees – reach the light  Broad/large leaves – to catch the sun  Coloured flowers – attract insects for pollination  Smelly fruit/durian – to attract animals for seed dispersal</p>	<b>4</b>	Not just description – explanation is needed to gain the marks

Question	Answer	Marks	Guidance
3(c)	<p><b>With reference to an area of tropical rainforest, describe the threats to the rainforest. How effective are management strategies used to conserve this area of rainforest?</b></p> <p><b>Content Guide</b></p> <p><u>Answers are likely to refer to:</u></p> <p>Deforestation Agricultural land Settlements Transport links Reforestation Tourism</p> <p><u>More developed answers are likely to refer to:</u></p> <p>Large areas of tropical rainforest have been cleared for plantation crops for export such as palm oil. Forested land has been cleared for housing, and towns and cities have expanded to accommodate the growing population. The Trans-Kalimantan Highway links four settlements in the four provinces of West, Central, South and East Kalimantan. Rainforest in Kalimantan has many valuable hardwood species such as meranti, which have high demand and command high prices. Dams are built across rivers to control flooding, create reservoirs that store water for farming, and to generate HEP. Reforestation can help but it must relate to the trees that were there previously and not just planting fast-growing tree species such as Acacia and Eucalyptus, as this will not replace the biodiversity. Encourage selective logging but this is difficult to monitor due to lack of manpower and remoteness of forested areas. Designate forests as protected areas where only ecotourism is allowed and logging prohibited, but these areas can be destroyed by uncontrolled forest fires.</p>	7	<p>There must be reference to the threats to the rainforest. The management strategies must have some form of evaluation with regard to how effective they are. Examples such as the Amazon rainforest/ Temburong.</p> <p><b>Levels marking</b></p> <p>Please ensure that you refer to the Levels of response marking section at the front of the mark scheme before marking this question.</p> <p>Causes not consequences</p> <p>Global warming = 0</p>

**OR**

Question	Answer	Marks	Guidance
4(a)	<b>Draw a labelled diagram to help explain how earthquakes are caused along a transform/conservative plate boundary.</b>  Reserve 1 mark for diagram Plates slide past each other/grind against each other Movement not smooth/different speeds Plates become stuck Friction/pressure builds up Pressure/energy released/shockwaves/seismic waves/tremors/vibrations	<b>4</b>	Reserve 1 mark for simple diagram showing direction of movement
4(b)(i)	<b>Which letter (X, Y or Z) represents the focus of the earthquake?</b>  Y	<b>1</b>	
4(b)(ii)	<b>Which letter (X, Y or Z) represents the epicentre of the earthquake?</b>  Z	<b>1</b>	
4(b)(iii)	<b>Describe the difference between the Richter scale and the Mercalli scale when measuring earthquakes.</b>  Richter scale measures the strength/of the magnitude/energy of the earthquake Mercalli scale measures the destruction/damage caused Richter scale ranges from 1 to 9/10 Mercalli scale ranges from 1 to 12	<b>2</b>	

Question	Answer	Marks	Guidance
4(c)(i)	<b>Identify <u>two</u> priorities for the emergency services shown in Fig. 4.2.</b>  Rescuing people Giving medical help Providing water/food/blankets/clothes Evacuating the building Removing bodies Shutting off gas/electricity supplies Clearing roads Making the existing buildings secure/preventing collapse	<b>2</b>	
4(c)(ii)	<b>Suggest reasons to explain why some buildings withstand an earthquake, as shown in the background of Fig. 4.2.</b>  Buildings are designed and built to be earthquake proof/stronger Shock absorbers/base isolators are used <u>to</u> absorb the tremors Cross-bracing/steel bars methods <u>to</u> strengthen walls Wider base and narrower top <u>for</u> stability Concrete walls <u>for</u> support/strengthen Shorter buildings <u>for</u> stability/less risk of collapse Reinforced glass <u>to</u> reduce breakage Build on solid ground <u>to</u> reduce collapse	<b>4</b>	Can repeat stability/risk of collapse/support, etc.  Better buildings = 0
4(d)(i)	<b>Describe the different types of material released by volcanic eruptions.</b>  Lava/molten rock Ash Cinders Volcanic Bombs Gases/Carbon dioxide/Sulphur dioxide Pyroclastic flows Lahar	<b>4</b>	Magma = 0 Dust/smoke = 0 Volcanic rock = 0

Question	Answer	Marks	Guidance
4(d)(ii)	<p><b>‘The benefits of living near to volcanoes outweigh the threats that a volcanic eruption can bring.’ With reference to examples, to what extent do you agree with this statement?</b></p> <p><b>Content Guide</b></p> <p><u>Answers are likely to refer to:</u></p> <p>Fertile soil Geothermal energy Tourism Mineral wealth Death/injuries Destruction/damage</p> <p><u>More developed answers are likely to refer to:</u></p> <p>Volcanoes result in fertile soil, so some farmers in Java can harvest three crops of rice per year. Metallic minerals, including copper, lead and zinc, are found in volcanic rocks and mining industries set up here providing jobs. Geothermal activity creates features such as hot springs and geysers, and this attracts tourists. Despite all the benefits that volcanoes can bring to an area, a very dangerous and destructive volcano can result in widespread damage to people and property. Volcanoes happen so rarely that the jobs and opportunities provided to an area by the volcano are worth the risk.</p>	7	<p>There must be reference to specific examples of volcanoes. Positive and negative points must be discussed and there has to be some form of agreement/disagreement/partial agreement with the statement.</p> <p>Example of any named volcano and selected countries (Japan/Indonesia, etc.).</p> <p><b>Levels marking</b></p> <p>Please ensure that you refer to the Levels of response marking section at the front of the mark scheme before marking this question.</p> <p><b>Max. L2 – 5 marks if no counter argument.</b></p>

**Theme 3: Economic development**Answer **one** question from this theme.**EITHER**

Question	Answer	Marks	Guidance
5(a)(i)	<b>State the number of tourists that visited Cambridge, as shown in Fig. 5.1.</b>  425 thousand/425 000	<b>1</b>	Must have thousand  Allow 422 000 – 430 000
5(a)(ii)	<b>Using Fig. 5.2, suggest reasons why tourists visit Cambridge.</b>  Old/historical buildings Beautiful buildings/unique architecture/style of buildings/religious building/museums/colleges Shopping Bars/entertainment/restaurants Good weather/sunny Greenery/grass area Pedestrianised streets Can cycle easily Clean/no litter/no air pollution	<b>4</b>	Beautiful scenery = 0 Summer = 0  Allow castle/palace
5(a)(iii)	<b>Suggest the problems that tourists may bring to the urban area shown in Fig. 5.2.</b>  Air pollution Noise pollution Congestion/crowds Litter Disruption to the daily lives of local residents/lack of parking Damage to buildings/grass areas/vandalism/graffiti Unacceptable behaviour/crime	<b>4</b>	Not problems more associated with rural areas such as loss of habitats  Overpopulation = 0 Culture = 0

Question	Answer	Marks	Guidance
5(a)(iv)	<p><b>Describe how government can reduce the problems created by tourism in urban areas.</b></p> <p>Provide litter bins            Educate tourists/posters about ...            Rules/laws/fines for litter/vandalism            Monitoring the area/CCTV cameras/police/wardens            Limit tourist numbers in an area            Replace/repair facilities that have been damaged by tourists            More public transport/encourage use of public transport            Listening to the opinions of local residents            Increase car parking cost            Tourist taxes            Offer incentives/subsidies to businesses to encourage sustainability            Improve transport networks (to reduce traffic congestion)</p>	4	<p>Rules/laws/fines must be specific (what it is for)</p> <p>Tour guides = 0</p>
5(b)(i)	<p><b>Define the term <i>sustainable tourism</i>.</b></p> <p>Making a positive impact as a visitor            While reducing the negative impacts on economy/society/conservation or preserve environment            Ensuring that the area continues to attract tourists/whilst maintaining income</p>	2	
5(b)(ii)	<p><b>Identify the features shown in Fig. 5.3 that suggest sustainable tourism is taking place in the area.</b></p> <p>Low density buildings/few buildings/small buildings            Trees still there/little deforestation            Natural building materials/stone/thatched/straw roof            Still a very natural environment/unspoilt views/natural scenery            Barbecue stands for self-catering            Wooden furniture</p>	3	<p>No credit for absent feature = car parks/roads/swimming pools/hotels</p> <p>Clean = 0            Beautiful = 0            Empty space = 0</p>

Question	Answer	Marks	Guidance
5(b)(iii)	<p><b>‘Sustainable tourism can only occur when low tourist numbers are involved.’ With reference to examples, to what extent do you agree with this statement?</b></p> <p><b>Content Guide</b></p> <p><u>Answers are likely to refer to:</u></p> <p>Protecting the environment is essential Easier with smaller numbers Mass tourism results in more cultural change Larger numbers result in more environmental damage Difficult to have sustainable tourism acting alongside mass tourism</p> <p><u>More developed answers are likely to refer to:</u></p> <p>Low numbers of tourists make it much easier to reap the greatest benefits, such as the creation of employment, while safeguarding the cultural heritage and minimising the negative impacts on the social and natural environment. Careful management is required to ensure that tourism is not doing any damage to the environment. Much easier to manage smaller numbers of tourists as less accommodation/ services are required. Mass tourism cannot result in sustainable tourism regardless of the plans put in place to manage tourism, e.g. Spanish resorts. Low numbers of tourism may not result in sufficient job creation for local communities.</p>	7	<p>There must be reference to examples – these will be wide ranging. Most candidates will use examples to support the statement but there may be examples that disagree.</p> <p><b>Levels marking</b></p> <p>Please ensure that you refer to the Levels of response marking section at the front of the mark scheme before marking this question.</p>



**OR**

Question	Answer	Marks	Guidance
6(a)(i)	<b>From Fig. 6.1, identify <u>two</u> natural causes of air pollution.</b>  Volcanoes Forest fires Sea spray Dust	<b>2</b>	Agriculture = 0
6(a)(ii)	<b>Describe how transport can cause air pollution.</b>  Exhaust fumes/poisonous gases/gases from car exhausts Nitrogen oxides/NO <sub>x</sub> Carbon monoxide/CO Sulphur dioxide/SO <sub>2</sub> Particulate matter/soot in vehicle exhausts Carbon dioxide/CO <sub>2</sub>	<b>2</b>	Gas = 0

Question	Answer	Marks	Guidance
6(a)(iii)	<p><b>Explain how the following strategies can be used to reduce the impact of industry on the environment:</b></p> <p><b>A legislation</b>  <b>B green taxes</b>  <b>C pollution permits.</b></p> <p><u>Legislation</u>  Laws to limit the amount of gases released, e.g. Clean Air Act  Set air quality/transport emission/anti-pollution standards  Companies can be fined for exceeding emissions of pollutants  Laws to restrict the extraction of raw material</p> <p><u>Green taxes</u>  Tax charged on a good that causes pollution through its usage, e.g. Carbon tax  A tax on carbon content of fuel measured in dollars per tonne of carbon contained in the fuel or per tonne of carbon dioxide emitted  Coal has a higher carbon content than propane, so will have a higher carbon tax  Revenue is generated for governments which enables environmental projects to be carried out</p> <p><u>Pollution permits</u>  These are allowances given to industries that emit pollution  ‘Cap and trade’ concept  A cap on the amount of emissions is set  Companies that exceed their cap will have to obtain additional allowances by trading</p>	6	Reserve 1 mark for each of the strategies

Question	Answer	Marks	Guidance
6(b)(i)	<p><b>Compare how the rank order of the countries shown in Fig. 6.2 changes between 2018 and 2023.</b></p> <p>Japan moves from 3rd to 4th/drops to 4th  Germany moves from 4th to 5th/drops to 5th  India moves from 5th to 3rd/increases to 3rd  Changed from China, USA, Japan, Germany, India <u>to</u> China, USA, India, Japan, Germany</p>	3	<p>Looking for changes – no marks for China and the USA as they remain in first and second positions in 2018 and 2023</p> <p>Changing % = 0</p> <p>Allow alternative approaches</p>
6(b)(ii)	<p><b>Describe the advantages and disadvantages of using solar energy.</b></p> <p><u>Advantages</u>  Renewable energy  Clean energy/environmentally friendly/no greenhouse gases  Low running cost/sunlight is free  Effective for low power use/household heating  Works well with long hours of sunshine  Great potential in rural areas in LICs  Rural areas are usually not connected to the electricity grid  Energy security in developing countries in the tropics and sub-tropics  Easy to maintain</p> <p><u>Disadvantages</u>  High setting up costs/solar panels expensive to buy  Large area is needed  Reduced supply on cloudy days/at night/varies with the weather  Visual pollution  Inefficient/do not produce a lot of electricity  Less effective in temperate climates  In winter, when demand for electricity is high, the daylight hours are shorter  Area may be taking up valuable farming land  Can lead to deforestation/destruction of habitats/disrupts ecosystems  Storage of solar energy is difficult</p>	5	<p>Reserve 1 mark for advantages/disadvantages</p> <p>Cheap = 0  Pollution = 0</p>

Question	Answer	Marks	Guidance
6(c)	<p><b>Explain the factors influencing the location of the Seria oil refinery in Brunei. Evaluate how important this refinery has been to the economy and people of Brunei.</b></p> <p><b>Content Guide</b></p> <p><u>Answers are likely to refer to:</u></p> <p>Availability of oil Water supply Transport links Provides jobs Increases GDP Self-sufficient in oil production</p> <p><u>More developed answers are likely to refer to:</u></p> <p>The primary factor is the occurrence of oil in Seria, and the Seria Oil Field is the place where the first oil well was drilled and oil production has not stopped. Most of the population in west Brunei live in Seria and Kuala Belait and these people provide the necessary labour for the oil refinery. The location of the oil refinery is far away from urban areas, so there is plenty of land available for future expansion. Water that is required for various processes in the oil refinery is readily available. There is a ready domestic market for petroleum products, which has grown over the years as the country develops. Seria is well connected by roads and the roads are also in good condition. The oil refinery employs a large number of locals and many young people and women are employed.</p>	7	<p>There must be reference to the factors influencing the location of the Seria oil refinery in Brunei. An evaluation must also be included to show how effective this refinery has been to the economy and the people in Brunei.</p> <p><b>Levels marking</b></p> <p>Please ensure that you refer to the Levels of response marking section at the front of the mark scheme before marking this question.</p>

Question	Answer	Marks	Guidance
6(c)	<p>Training programmes have been put in place to ensure that there is a constant supply of competent local workers, and the company Shell has a two year training programme to train local people to work in the oil industry. However, despite this, the oil reserves in Brunei are expected to last only another 25 years and the natural gas another 40 years.</p> <p>There is a limited life span of the natural resources, so the government is very keen to diversify the economy.</p> <p>It aims to upgrade the skills of the labour force, reduce unemployment, strengthen the banking and tourism sectors, and widen the economic base to be less reliant on oil and gas production.</p> <p>The priority areas are finance, hospitality, agriculture and software development.</p>		