



Cambridge Pre-U

GEOGRAPHY

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Paper 3 Geographical Issues

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MARK SCHEME

Maximum Mark: 105

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.

Section A

Tectonic Hazards

Question	Answer	Marks
1(a)	<p>State <u>two</u> characteristics of rift valleys</p> <p>A variety of characteristics could be mentioned such as downfaulted valley floor, parallel, steep valley sides. Some have volcanoes and volcanic debris associated with them such as the East African Rift Valley.</p>	2
1(b)	<p>Compare the intensity of the Christchurch, New Zealand and Haiti earthquakes shown in Fig. 1.1</p> <p>Comparison could be in terms of relative values on the Modified Mercalli scale, which is a measure of the damage caused, and the numbers in each category. Also, there were many more lower-level impacts in the Christchurch earthquake and more higher-level impacts resulting from the Haiti earthquake.</p> <p>Mark as four points for four marks.</p>	4
1(c)	<p>Briefly explain why earthquakes of similar intensities might result in different impacts on lives and properties.</p> <p>Indicative content</p> <p>As the strength of the earthquakes is similar, explanation must lie elsewhere. This is a generic question so no prior knowledge is needed. Differences could be in terms of depth of focus and location of the epicentre, building construction, nature of bedrock, population density, and time of day.</p> <p>Candidates show:</p> <p>Level 3 A thorough understanding of the main factors that affect the impacts of earthquakes. Good use of specific examples. 4–5</p> <p>Level 2 Some understanding of the factors that affect the impacts of earthquakes but with a limited range and incomplete explanation. Specific examples may be lacking in detail or missing completely. 2–3</p> <p>Level 1 Little understanding of the factors that affect the impacts of earthquakes. Specific examples, if noted, will be inaccurate. 0–4</p>	5

Question	Answer	Marks
1(d)	<p>'It is easier to identify the risks posed by volcanoes than the risks posed by earthquakes.'</p> <p>How far do you agree with this statement?</p> <p>Indicative content</p> <p>There needs to be a discussion of the risks posed by each hazard. This will be related to the different nature of the risks and the ways in which these risks might lead to specific hazards. The likelihood of prediction is also a consideration. Thus, for volcanoes, the type of eruption is closely related to the potential risks. The location of volcanoes is well known as is their eruption type and resultant risks and associated hazards. The risks from earthquakes are also well-known but it is very difficult to predict the location and strength of any potential earthquakes. An approach focusing on predication is acceptable.</p> <p>Candidates show:</p> <p>Level 3 A thorough understanding of the risks associated with volcanoes and earthquakes with a realistic assessment of the relative ease of identification. 8–9</p> <p>Level 2 A partial understanding of the risks associated with volcanoes and earthquakes, with an incomplete assessment of the ease of identification. 5–7</p> <p>Level 1 A superficial understanding of the risks with little assessment. 0–4</p>	9

Meteorological Hazards

Question	Answer	Marks
2(a)	<p>State <u>two</u> characteristics of blizzards.</p> <p>Intense snowfall, strong winds, long length of time, decreased visibility are acceptable but there are others that might be acceptable.</p>	2
2(b)	<p>Describe the pattern of blizzard warnings shown in Fig. 2.1.</p> <p>There are four main elements that could be described: the strong concentration in northern Mid-west to the west of the Great Lakes, spreading south and south-east, isolated areas in the extreme north-west and north-east coast, limited occurrence just east of the Great Lakes. The emphasis should be on the pattern, with data, and not a location-by-location account.</p> <p>Mark as four points for four marks.</p>	4

Question	Answer	Marks
2(c)	<p>Briefly explain <u>two</u> possible hazards associated with blizzards.</p> <p>Indicative content</p> <p>The hazards will need to be related to the characteristics noted in part (a). There are many that could be discussed such as breakdown in communications, vehicle crashes, vehicles getting abandoned, hypothermia, power lines down, airports closed and many others.</p> <p>Candidates show:</p> <p>Level 3 A thorough understanding of two hazards associated with blizzards. 4–5</p> <p>Level 2 A partial understanding of two hazards associated with blizzards but it will be unbalanced between the factors. 2–3</p> <p>Level 1 Little understanding of two hazards associated with blizzards. 0–1</p>	5
2(d)	<p>Explain how regional and local scale meteorological hazards differ in their nature and effects.</p> <p>Indicative content</p> <p>Regional scale meteorological hazards are associated with tropical storms and cyclones. Local scale hazards, noted in the syllabus, are related to tornadoes, hail, blizzards, fog and smog. Answers could be explained in terms of the spatial scale of the impacts, length of time of the hazard and the different dangers associated with each hazard such as comparing tropical storms with tornadoes.</p> <p>Candidates show:</p> <p>Level 3 A thorough understanding and assessment as to how the dangers associated with the different scale of the meteorological hazards differ in their nature and effects. There will be an accurate range of dangers associated with each scale. 8–9</p> <p>Level 2 A partial understanding of the differences between nature and effects of hazards at a regional and local scale but with an incomplete assessment. 5–7</p> <p>Level 1 A superficial understanding of the differences between regional and local scale meteorological hazards in their nature and effects. 0–4</p>	9

Hydrological Hazards

Question	Answer	Marks
3(a)	<p>Define the hydrological term <i>percolation</i>.</p> <p>The downward movement of water through the soil and rock (1 mark) after infiltration (1 mark).</p>	2
3(b)	<p>Describe the pattern of the largest annual flows shown in Fig. 3.1</p> <p>The largest annual flows show a sequence of peaks and troughs, with three major peaks in the 1940s, 1960s and 2000s.</p> <p>Two points with accurate data for the four marks.</p>	4
3(c)	<p>Briefly explain <u>two</u> factors that affect the long-term variation in the scale of annual river flows.</p> <p>Indicative content</p> <p>The main factors that could be discussed are precipitation variations, perhaps associated with climate change, and land use change. The factors must relate to aspects that change and are not permanent such as topography, soils and rock type. The emphasis should be on long term variation. Two main factors with discussion are needed for full marks.</p> <p>Candidates show:</p> <p>Level 3 A thorough understanding of two factors that affect the long-term variation in the scale of annual river flows. Answer is well-balanced between the two factors. 4–5</p> <p>Level 2 A partial understanding of two factors that affect the long-term variation in the scale of annual river flows. Answer will be unbalanced between the factors. 2–3</p> <p>Level 1 A superficial understanding of the factors that affect the long-term variation in the scale of annual river flows. 0–1</p>	5

Question	Answer	Marks
3(d)	<p>Assess the extent to which hard engineering solutions prevent rivers from flooding?</p> <p>Indicative content</p> <p>There needs to be a good understanding of hard engineering strategies such as dams, artificial levees, channel deepening, widening and diversion. These need to be related to how efficient they are at preventing flooding. The use of examples will be needed to substantiate the assessment. There might be a comparison with soft engineering techniques but this is not essential.</p> <p>Candidates show:</p> <p>Level 3 A thorough understanding of hard engineering strategies with a realistic assessment of their success or otherwise in preventing flooding. 8–9</p> <p>Level 2 A partial understanding of hard engineering strategies with an incomplete assessment of their success in preventing flooding. 5–7</p> <p>Level 1 A superficial understanding of hard engineering strategies with little assessment of their success in preventing flooding. 0–4</p>	9

Section B

Crime Issues

Question	Answer	Marks
4(a)	<p>State two crimes against people.</p> <p>The syllabus lists violence, racial crimes, child prostitution, but there could be others.</p>	2
4(b)	<p>Describe the pattern of cocaine flows shown in Fig. 4.1.</p> <p>The main flows are from South America (Andean Regions) to the USA and Europe. There are other flows such as to West Africa and then to Europe and to South Africa.</p> <p>Two main points with data support for four marks.</p>	4
4(c)	<p>Outline <u>two</u> international scale initiatives to combat drug trafficking.</p> <p>Indicative content</p> <p>The syllabus includes border control, cooperation between countries, airport security and perhaps the role of international media.</p> <p>Candidates show:</p> <p>Level 3 A thorough understanding of two international scale initiatives to combat drug trafficking. 4–5</p> <p>Level 2 A partial understanding of two international scale initiatives to combat drug trafficking. Answer will be unbalanced between the factors. 2–3</p> <p>Level 1 A superficial understanding of international scale initiatives to combat drug trafficking. 0–1</p>	5

Question	Answer	Marks
4(d)	<p>Assess the economic impacts on communities of high levels of crime.</p> <p>Indicative content</p> <p>The emphasis is on economic impacts but it might sometimes be difficult to separate economic from social impacts. Some economic impacts would be on the cost of target hardening, alarms, loss of belongings and valuables, etc. Insurance costs could also figure in the discussion. Personal injury might lead to a loss of earnings. Insurance rates in areas of high crime are often higher. Communities could refer to individuals and groups of people with different characteristics.</p> <p>Candidates show:</p> <p>Level 3 A thorough understanding and realistic assessment of the economic impacts on communities of high levels of crime, with a good range of examples. 8–9</p> <p>Level 2 A partial understanding of the economic impacts on communities of high levels of crime with limited assessment. A limited range of examples will be used. 5–7</p> <p>Level 1 Little understanding of the economic impacts on communities of high levels of crime with a basic assessment. 0–4</p>	9

Health Issues

Question	Answer	Marks
5(a)	<p>Define <i>infant mortality rate</i>.</p> <p>The number of deaths per 1000 live births (1 mark) of children under one year of age (1 mark).</p>	2
5(b)	<p>Describe the pattern of confirmed cases of swine flu shown in Fig. 5.1.</p> <p>There are major clusters in Europe and South America. However, the cluster is more apparent than real because of the number of countries involved particularly in Europe. There are minimal deaths throughout Africa and Central Asia. Figures are also high in North America.</p> <p>Use of the data is needed for full marks.</p>	4

Question	Answer	Marks
5(c)	<p>Briefly explain <u>two</u> factors that influence the spread of disease.</p> <p>Indicative content</p> <p>The explanation will depend on how the diseases are spread. If face-to face contact is concerned then population density, migration and travel are important factors. The spread of sexual diseases requires more intimate contact. Spread of disease via insects such as mosquitoes is another example but there are many more.</p> <p>Candidates show:</p> <p>Level 3 A well-balanced and thorough understanding of two factors that influence the spread of disease. 4–5</p> <p>Level 2 A partial understanding of two factors that influence the spread of disease. 2–3</p> <p>Level 1 Little understanding of two factors that influence the spread of disease. 0–1</p>	5
5(d)	<p>Assess the ways in which health care provision can be improved at the national scale.</p> <p>Indicative content</p> <p>The syllabus lists a range of ways in which health care provision might be improved such as increasing the numbers of doctors, nurses and hospitals, greater awareness of good diet and other life style choices (smoking, drinking), improving access to clean water, vaccinations and many more.</p> <p>Candidates show:</p> <p>Level 3 A thorough understanding and a realistic assessment of a good range of the ways in which health care provision has been improved. 8–9</p> <p>Level 2 A partial understanding with limited assessment of the ways in which health care provision has been improved. 5–7</p> <p>Level 1 Little understanding with a basic assessment of the ways in which health care provision has been improved. 0–4</p>	9

Spatial Inequality and Poverty Issues

Question	Answer	Marks
6(a)	<p>State <u>two</u> composite indices that can be used to measure poverty and inequality.</p> <p>The main ones listed in the syllabus are Human Development Index (HDI), Human Poverty Index (HPI) and Multidimensional Poverty Index (MPI). There are other indices, apart from these, that are relevant, the most quoted one being the Gender Inequality Index (GII).</p>	2
6(b)	<p>Compare the changes in extreme poverty rates shown in Fig. 6.1</p> <p>The main points are: China has reduced the most during the period from a higher initial value. India also shows a decrease in poverty rates but the reduction has been less marked than China. Sub-Saharan Africa has fluctuated in poverty rates and not really decreased at all.</p> <p>Three points with respect to each region with data for four marks.</p>	4
6(c)	<p>Suggest <u>two</u> possible explanations for the differences in the changes in extreme poverty rates shown in Fig. 6.1.</p> <p>Indicative content</p> <p>Suggestions should relate to the points raised in part (b). There are many threads to an assessment such as population increase, economic development, land degradation, drought, famine, etc. Two factors well explained could get full marks.</p> <p>Candidates show:</p> <p>Level 3 A thorough and well-balanced understanding of two factors that explain the differences in poverty rates shown in Fig. 6.1. 4–5</p> <p>Level 2 A partial understanding of two factors that explain the differences in poverty rates. Answers will be unbalanced between the factors. 2–3</p> <p>Level 1 Little understanding of two factors that explain the differences in poverty rates. 0–1</p>	5

Question	Answer	Marks
6(d)	<p>The North/South divide explains global patterns of inequality and poverty.</p> <p>How far do you agree with this statement?</p> <p>Indicative content</p> <p>The question requires a thorough understanding of the factors that affect global patterns of inequality and poverty and the ability to relate these to the so-called North-South divide. Many will see this as referring to the development gap. There needs to be an understanding that globalisation, especially the rise of Asian Tigers, has affected this broad statement.</p> <p>Candidates show:</p> <p>Level 3 A thorough understanding and realistic assessment of the validity of the North/South divide in explaining the global patterns of inequality and poverty. 8–9</p> <p>Level 2 A partial understanding and limited assessment of the validity of the North/South divide in explaining the global patterns of inequality and poverty. 5–7</p> <p>Level 1 Little understanding with a basic assessment of the validity of the North/South divide in explaining the global patterns of inequality and poverty. 0–4</p>	9

Section C

Question	Answer	Marks
7	<p>With respect to an area you have studied, assess how the level of economic development of that area has affected the response to physical hazards (tectonic, meteorological, hydrological).</p> <p>Indicative content</p> <p>The key is the description and analysis of the geographical hazards that the chosen area possesses. The area chosen will also determine the influence of the level of development on the response to these hazards. The hazards could come from any of the Section A options. The area chosen could be of any scale.</p> <p>At lower levels, candidates will experience problems in relating the response to the hazards with respect to the level of development. At higher levels, candidates will have a firm understanding of the hazards and the way the responses are related to level of development.</p>	25
8	<p>Geographical issues (crime, health, spatial inequality, poverty) are more a product of the physical environment than the human environment.'</p> <p>How far do you agree with this statement?</p> <p>Indicative content</p> <p>The key is the understanding of a variety of geographical issues, which can be taken from Section A or Section B or both. These issues will then need to be assessed with respect to the physical and human environments in which these issues occur.</p> <p>At lower levels, candidates will experience problems in relating the issues to the physical and human environment. At higher levels, candidates will have a firm understanding of the issues and relationship to the specific environment.</p>	25
9	<p>Assess the extent to which planning and risk identification can reduce the impacts of physical hazards (tectonic, meteorological, hydrological).</p> <p>Indicative content</p> <p>The key is the understanding of the nature of geographical hazards chosen for evaluation. However, planning and risk identification is relevant to whatever hazards are chosen. These impacts will then need to be assessed in relation to planning and risk</p> <p>At lower levels, candidates will experience problems in assessing planning and risk identification associated with the hazards with little realistic assessment. At higher levels, candidates will have a firm understanding of the role of planning and risk identification in reducing the impacts of the hazards chosen for discussion.</p>	25

The Generic Mark Scheme (GMS)

Level	Marks	Assessment criteria
5	22–25	<ul style="list-style-type: none"> • Wide-ranging, detailed and accurate knowledge and clear, high level understanding of the subject content • Relevant, detailed and accurate exemplification used effectively • Logical and clear organisation; good English expression; full and accurate use of geographical terminology • Well annotated and executed sketch maps/diagrams integrated fully with the text • Fully focused on specific demands of the question • Systematic analysis and a critical approach to evaluation; appropriate application of concepts and theories • Conclusion shows high level insight and is logical and well founded on evidence and argument
4	18–21	<ul style="list-style-type: none"> • Good knowledge and depth of understanding of the subject content • Appropriate and well-developed exemplification • Logical organisation; sound English expression; appropriate use of geographical terminology • Clearly annotated sketch maps/diagrams well integrated with the text • Well focused on the demands of the question • Elements of systematic analysis and ability to evaluate; generally appropriate application of concepts and theories • Conclusion is sound and based on evidence and argument
3	14–17	<ul style="list-style-type: none"> • Sound knowledge and understanding of the subject content lacking depth in some areas • Appropriate but partial exemplification, may not be integrated with the text • Generally clear communication but lacking some organisation; English expression and use of geographical terminology are mostly accurate • Sketch maps/diagrams generally used effectively and appropriately • Specific demands of the question mostly met • Some ability to analyse and evaluate; limited application of concepts and theories • Conclusion is limited and has some links to the rest of the response
2	10–13	<ul style="list-style-type: none"> • Some knowledge and understanding of the subject content lacking depth and detail • Exemplification used may be limited or not fully appropriate • Limited organisation; English expression is basic with some accurate use of geographical terminology • Sketch maps/diagrams may have inaccuracies and limited relevance • Question is addressed broadly or partially • Analysis, evaluation and application of concepts and theories are limited and may be superficial • Conclusion is basic and may not be linked to the rest of the response.

Level	Marks	Assessment criteria
1	1–9	<ul style="list-style-type: none"> • A little knowledge and understanding of the subject content; response may also contain unconnected material • Exemplification, if used, is simple and poorly related to the text or may not be relevant • Lack of clarity and organisation; English expression is simple with inaccuracies; geographical terminology, if used, is basic or not understood • Sketch maps/diagrams are limited or poorly executed and may lack relevance • Question is understood weakly and may be addressed slightly • Superficial statements replace analysis and evaluation; application of concepts and theories may be minimal or absent • Conclusion may be absent or simply asserted
0	0	No creditable response