



**Cambridge International Examinations**  
Cambridge Ordinary Level

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**GEOGRAPHY**

**2230/01**

Paper 1 Themes

**May/June 2017**

MARK SCHEME

Maximum Mark: 75

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**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.

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**LEVELS OF RESPONSE MARKING**

It is the quality of the response which determines the mark achieved and differentiates between candidates rather than the quantity of comments. However, once assigned to a level, the mark achieved within that level is determined by the number of points made.

**Level 1** [L1] is characterised by simple statements.

**Level 2** [L2] will contain statements which are developed / elaborated. A candidate can immediately enter L2 by making developed points from the outset, without making any L1 statements.

For **Level 3** [L3], a candidate must have achieved the top end of L2 [6 marks] with an answer containing developed statements which address all aspects of the question and include at least one clear example, if required [7 marks].

LEVEL	CHARACTERISTICS	MARKS	CONTENTS
<b>L1</b>	Simple statements	1	1 simple statement
		2	2 simple statements
		3	3 simple statements
<b>L2</b>	Developed statements	4	1 developed statement
		5	2 developed statements
		6	3 or more developed statements
<b>L3</b>	Top of L2 statements [i.e. 3 or more developed statements]	7	3 or more developed statements All aspects of question covered [A] At least one example, if required

**Theme A: The natural world**

Answer **one** question from this theme, **either** Question 1 **or** Question 2.

Question	Answer	Marks
1(a)	<p><b>Name and describe <u>two</u> processes of river erosion.</b></p> <p>Credit the following            Corrasion = 1, river load wearing / hitting / knocking away bed / sides = 1            Attrition = 1, river load worn smaller and smoother / rocks hitting each other = 1            Corrosion = 1, river water has a dissolving action / acidic effect = 1            Hydraulic activity = 1, power of the water removes / washes away material = 1</p>	<b>4</b>
1(b)(i)	<p><b>Study Photograph A (Insert), which shows part of a river's course.</b></p> <p><b>Describe the course of the river and identify the land labelled <u>X</u>.</b></p> <p>Credit the following at 1 mark each            Middle / valley course            Meandering / bending            Slow / moderate flow            Gentle / moderate gradient            X equals <u>floodplain</u> = 1 (reserve)</p>	<b>4</b>
1(b)(ii)	<p><b>Identify features <u>Y</u> and <u>Z</u>.</b></p> <p>Credit the following at 1 mark each            Y = <u>river cliff</u>            Z = slip-off slope / river beach</p>	<b>2</b>
1(b)(iii)	<p><b>Explain how features <u>Y</u> and <u>Z</u> have been formed.</b></p> <p>Credit the following (reserve 2 marks for each)  <u>Slip-off slope (Z)</u>            Inside meander curve / concave bank            Slow flow of river            Less energy            Deposition / accumulates (too heavy = 0)</p> <p><u>River cliff (Y)</u>            Outside meander curve / convex bank            Rapid faster flow of river            Greater energy            Erosion (processes = 0)</p>	<b>6</b>
1(b)(iv)	<p><b>Describe and explain the likely change in position of the river channel in future.</b></p> <p>Credit the following            Movement towards river cliff / away from slip-off slope / downstream / flows straight / forms ox-bow            River bank removed / eroded on that side (river cliff), built up opposite side (slip-off slope)</p>	<b>2</b>

Question	Answer	Marks
1(c)	<p><b>Explain why some rivers have deltas and distributaries at their mouths whilst other rivers do not. Give examples to support your answer.</b></p> <p>Levels marking</p> <p><u>Examples of simple statements</u> (Where simple detail is linked to a named delta or river = L2) Deposition occurs at river mouth Rivers slow as they enter the sea River channels divide into distributaries Tides do not always remove deposits</p> <p><u>Examples of developed statements</u> Rivers carry large amounts of load which is deposited at its mouth Seas have weak tides so that deposits accumulate Some rivers deposit material which encourages braiding and distributary formation</p>	7

Question	Answer	Marks
2(a)	<p><b>Study Fig. 1, which shows the global distribution of the tropical equatorial climate.</b></p> <p><b>Describe the distribution of the tropical equatorial climate shown in Fig. 1.</b></p> <p>Credit the following at 1 mark each On / near equator Amazon basin / Brazil / Northern S. America West / central Africa / Zaire / Congo basin SE Asia / Indonesia, etc.</p>	3
2(b)(i)	<p><b>Study Fig. 2, which shows a graph of the tropical equatorial climate.</b></p> <p><b>Describe the temperature characteristics of the tropical equatorial climate shown in Fig. 2.</b></p> <p>Credit the following at 1 mark each High temperature / over 25 °C Little change in temperature / small annual range / highest temp. 28 °C, lowest 26 °C / constant / 2–3 °C / high temp. throughout year</p>	2
2(b)(ii)	<p><b>Explain the characteristics you have described in (b)(i).</b></p> <p>Credit the following at 1 mark each Sun at high angle (near equator = 0) Throughout the year Short journey of rays through atmosphere Heat concentrated at surface</p>	3

Question	Answer	Marks
2(b)(iii)	<p><b>Much of the rainfall of the tropical equatorial climate is convectional. Explain how convectional rainfall forms. You must use a diagram to support your answer.</b></p> <p>Credit the following annotations at 1 mark each (no diagram = max. 3 marks) Heat from sun warms ground Air above ground heated Evaporation occurs Hot air / water vapour rises Cools Reaches saturation point Condenses / forms cloud</p>	<b>4</b>
2(c)	<p><b>Study Fig. 3, which shows the annual rainfall of a tropical monsoon climate.</b></p> <p><b>Explain why rainfall totals are much higher between the months of June to October than for the rest of the year.</b></p> <p>Credit the following at 1 mark each SW Monsoon Wind blows onshore from June to October Blows from high to low pressure Imports moist air Air rises more easily in low pressure (June / Oct) / obverse for high pressure Wind blows offshore rest of year</p>	<b>4</b>
2(d)	<p><b>State the difference between weather and climate.</b></p> <p>Credit the following at 1 mark each Weather is the state of the atmosphere (cloud, rain, etc.) over a short period Climate is the average weather over many years (or similar) (Seasonal changes = 0)</p>	<b>2</b>

Question	Answer	Marks
2(e)	<p><b>Describe and explain the causes and effects of typhoons. Give examples to support your answer.</b></p> <p>Levels marking</p> <p><u>Examples of simple statements</u> (Where simple info. detail is linked to a located example = L2) Typhoons cause great damage to property They cause death and injury Typhoons experience very strong winds Typhoons are caused by low pressure</p> <p><u>Examples of developed statements</u> Typhoons form over tropical seas where there is high evaporation Low pressure draws in surrounding air which rises and condenses Typhoons seriously affect coasts where winds reach over 70 mph and extensive damage is caused Philippines were hit in 2014 where 38 people killed and 7 billion dollars damage</p>	7

**Theme B: People, food and settlement**

Answer **one** question from this theme, **either** Question 3 **or** Question 4.

Question	Answer	Marks
3(a)	<p><b>What is meant by <i>population density</i>?</b></p> <p>Credit the following Number of people per (unit) area (or similar) = 2 marks (Population in a country = 0) Idea of crowdedness / sparseness of population = 1</p>	2
3(b)	<p><b>Study Fig. 4, which shows the population density of eastern Australia.</b></p> <p><b>Describe the pattern of population density shown in Fig. 4.</b></p> <p>Credit the following at 1 mark each     <u>not exact repetition</u> Decreases inland Highest (100+ pskm) on (east) coast / sporadic places on east coast / Tasman sea / sea 10–100 pskm near / on coast in south / Coral sea 1–10 pskm near / on coast in north / further inland (look for sequence if given) 0–1 pskm in east / furthest inland</p>	3

Question	Answer	Marks
3(c)	<p><b>Study Fig. 5, which shows annual rainfall totals for eastern Australia.</b></p> <p><b>Use the information in Fig. 5 and Fig. 4 to state the relationship between rainfall totals and population density.</b></p> <p>Credit the following The higher the rainfall total the higher the population density</p>	<b>1</b>
3(d)	<p><b>Suggest economic reasons which may cause a high population density.</b></p> <p>Credit the following at 1 mark each Areas can be <u>important centres</u> of:</p> <p>Industry / factories Employment Finance / business (wages / migration / SOL = 0) Retailing / entertainment Mining Tourism Education Agriculture / fishing Transport / ports etc.</p>	<b>4</b>
3(e)(i)	<p><b>Study Fig. 6, which shows a population pyramid for Angola in 2012.</b></p> <p><b>Explain how the population pyramid shows Angola to have a high birth rate.</b></p> <p>Credit the following Wide base / 0 to 4 is high</p>	<b>1</b>
3(e)(ii)	<p><b>Explain why some countries have high birth rates.</b></p> <p>Credit the following at 1 mark each (defence of country = 0) Problems of contraception High infant mortality Children seen as economic assets / help with farming Education limited re: birth control Importance of sons to continue family name Early marriage Society / religion encourages large families Care of ageing parents Child's education not compulsory Women not career minded</p>	<b>3</b>

Question	Answer	Marks
3(e)(iii)	<p><b>Describe the future problems that a country with a high birth rate may need to deal with.</b></p> <p>Credit the following at 1 mark each Possible problems could include:</p> <ul style="list-style-type: none"> <li>Unemployment</li> <li>Educational provision</li> <li>Inadequate health services (overpopulation / crowding / crime = 0)</li> <li>Food</li> <li>Water supply (lack of resources = 0)</li> <li>Housing</li> <li>Sanitation</li> <li>Increased poverty</li> <li>Future population growth</li> <li>Traffic congestion</li> <li>Pollution specified</li> <li>Deforestation / environmental damage</li> </ul>	<b>4</b>
3(f)	<p><b>Evaluate strategies used to improve the quality of life in LEDCs. Give examples to support your answer.</b></p> <p>Levels marking</p> <p><u>Examples of simple statements</u> (Located detail of strategy = L2 e.g. one child policy in China) (Clear evaluation needed for max., not implied benefits) Clean water supplies developed (more than one strategy needed) Self-help groups organised Local hospitals / clinics built Compulsory primary education Farming improvements carried out</p> <p><u>Examples of developed statements</u> Overseas agencies help villagers to dig deep wells and so improve the quality of water supply Local schemes whereby tools are supplied to groups to assist with house building are developed Doctors will travel to village clinics to treat people and supply basic medicines Farmers take part in 'fair trade' initiatives so that reasonable prices for crops are obtained</p>	<b>7</b>



Question	Answer	Marks
4(a)(i)	<p><b>Study Fig. 7, a graph which shows the average daily calorie intake of the world, 1965–2015.</b></p> <p><b>Describe the change of calorie intake shown by Fig. 7 between 1965–2015. Use figures from the graph to support your answer.</b></p> <p>Credit the following at 1 mark each</p> <p>Increasing overall By about 600 calories per day / 570 (<math>\pm 20</math>) / from 2380 (<math>\pm 10</math>) to 2950 (<math>\pm 10</math>)</p>	2
4(a)(ii)	<p><b>Explain how alterations in farming practices have affected the change you have described in (a)(i).</b></p> <p>Credit the following at 1 mark each</p> <p>Increasing use of: Skills / education Investment Technology / machinery Fertiliser Pesticides / herbicides Irrigation / drainage Seeds / GM crops Consolidation, etc. Double cropping</p>	5
4(b)(i)	<p><b>Study Fig. 8, graphs which show a recommended healthy diet and typical diets for people in India and the USA.</b></p> <p><b>Compare the recommended daily calorie intake and the total daily calorie intakes for India and the USA.</b></p> <p>Credit the following at 1 mark each</p> <p>India is close to this / slightly less / less / lower USA is (much) higher than this</p>	2
4(b)(ii)	<p><b>State the differences between the typical diets for people in India and the USA shown in Fig. 8.</b></p> <p>Credit the following at 1 mark each</p> <p>India has far more cereals than the USA (60–20 / 25%) India has much less fat / sugar than the USA (20–37%) India has less meat and eggs than the USA (10–30%) India has less dairy than the USA (10–20%)</p>	3
4(c)(i)	<p><b>Define <i>obesity</i>.</b></p> <p>Credit the following at 1 mark each</p> <p>Carrying too much body fat / overweight</p>	2

Question	Answer	Marks
4(c)(ii)	<p><b>Study Fig. 8 again.</b></p> <p><b>Explain how people in both India and the USA can be described as malnourished. Suggest the consequences of this malnourishment.</b></p> <p>Credit the following at 1 mark each</p> <p><u>India</u> Lacks protein / meat, eggs / dairy / fruit veg / too many cereals (Lifting figures = 0) Leads to deficiency disease e.g. Kwashiorkor, etc.</p> <p><u>USA</u> Too much fat / sugar / too little fruit vegetables Leads to heart disease, diabetes, etc.</p>	4
4(d)	<p><b>Apart from differences in farming technique, explain why food production and consumption varies in different parts of the world. Give examples to support your answer.</b></p> <p>Levels marking</p> <p><u>Examples of simple statements</u> (Simple statement located = L2) Area may have excellent physical conditions for farming MEDCs can afford to import various foods (Human inputs = 0) People in wealthy areas can afford to eat more High population growth rates underlines consumption target</p> <p><u>Examples of developed statements</u> A country's climate and soil conditions allow double cropping and a greater food supply Wealthy countries can eat fruit all year round as they can import from any other country Improved transport within a country allows food to be easily distributed to shops and people</p>	7

### Theme C: Industry, energy and tourism

Answer **one** question from this theme, **either** Question 5 **or** Question 6.

Question	Answer	Marks
5(a)(i)	<p><b>Study Fig. 9, which shows changes in the percentage employed in industrial classes over time.</b></p> <p><b>In which class were most people originally employed?</b></p> <p>Credit the following Primary</p>	1

Question	Answer	Marks
5(a)(ii)	<p><b>Describe the changes in employment in the different classes over time.</b></p> <p>Credit the following at 1 mark each            Primary decreases            Tertiary increases            Secondary increases then decreases (Fluctuated = 0)</p>	3
5(b)(i)	<p><b>Study Fig. 9 again and Fig. 10, which shows the classes of employment in percentages for the UK, Bangladesh and Ghana in 2010.</b></p> <p><b>Which letter (A, B or C) on Fig. 9 shows the employment classes for the UK in Fig. 10? Justify your answer.</b></p> <p>Credit the following at 1 mark each            Position C = 1 (reserved)            Primary much lower (than others)            Tertiary much higher (than others)</p>	3
5(b)(ii)	<p><b>Explain why the percentage employed in the primary industry in a country changes over time.</b></p> <p>Credit the following at 1 mark each            More income in other classes            Better working conditions in other classes / easier work / hot sun            Urbanisation            Mechanisation in farming            Public sector employment / government jobs            Improved education leads to different jobs            Increased wealth creates different jobs            Exhaustion of natural resources, etc. (Move to other classes = 0)            Growth of tourism</p>	4
5(c)(i)	<p><b>Study Photograph B (Insert), which shows the location of several factories.</b></p> <p><b>Describe the factories and their location shown on Photograph B.</b></p> <p>Credit the following at 1 mark each            Low / single storey            Rectangular / square shapes / long            Blue / grey colour            Car parking areas            Varying sizes / big / small            6 units (Separate buildings = 0)</p> <p>Location (Reserve 1 for location)            Rural countryside area / greenery            Flat land            Near settlements            Large area            Near farms            Near road            Near railway</p>	4

Question	Answer	Marks
5(c)(ii)	<p><b>Explain why some people might object to the building of the factories at this location.</b></p> <p>Credit the following at 1 mark each</p> <p>Traffic increase</p> <p>Takes up farmland</p> <p>Affects food production</p> <p>Increases visual / air / noise pollution</p> <p>Affects habitat of local flora and fauna / reference to landscape, environment</p> <p>Increases run-off / reduces infiltration</p>	<b>3</b>
5(d)	<p><b>How far do you agree that the influence of government is the most important factor affecting industrial location? Justify your answer and support it with examples.</b></p> <p>Levels marking</p> <p><u>Examples of simple statements</u></p> <p>(Simple point located = L2)</p> <p>(Needs comment re: agreement for max.)</p> <p>Governments may attract companies from other countries</p> <p>Government policy may include the building of industrial estates</p> <p>An efficient workforce is the most important factor</p> <p>Flat land is an important physical attraction</p> <p><u>Examples of developed statements</u></p> <p>Governments may attract overseas companies through various financial incentives</p> <p>Governments may build industrial estates with gas, electricity and transport infrastructure</p> <p>Some industries need to be near their raw material such as the oil refinery at Seria being next to the offshore oil fields</p> <p>NICs have developed their IT skills so that global companies are located there</p>	<b>7</b>

Question	Answer	Marks
6(a)	<p><b>Study Fig. 11 (Insert), which shows part of a brochure advertising the attractions of a holiday in South Africa.</b></p> <p><b>Describe the physical attractions of South Africa for a holiday, mentioned in the brochure.</b></p> <p>Credit the following at 1 mark each</p> <p>Diverse landscapes Spectacular wildlife Spectacular scenery Year-round warm weather</p>	<b>3</b>
6(b)(i)	<p><b>Study Fig. 12, a graph which shows the income from tourism in South Africa from 2000 to 2014.</b></p> <p><b>State the increase in income from tourism in South Africa between 2000 and 2014.</b></p> <p>Credit the following 82–84 billion rand</p>	<b>1</b>
6(b)(ii)	<p><b>Describe the changing trends in income from tourism to South Africa between 2000 and 2014.</b></p> <p>Credit the following at 1 mark each</p> <p>Allow increase overall / a yearly increase; decrease Slight increase 2000–2002 / 2005–2007 / 2008–2009 / 2011–2013 Rapid increase 2002–2003 / 2004–2005 / 2010–2011 / 2013–2014 Slight decrease 2003–2004 / 2009–2010 Static 2007–2008</p>	<b>4</b>
6(b)(iii)	<p><b>Many of the visitors to South Africa travel by ‘long haul’ flights. Explain why this type of holiday transport is becoming more popular.</b></p> <p>Credit the following at 1 mark each</p> <p>Increased personal wealth Longer holiday entitlement Aeroplanes travel further / faster Lower prices Curious to view famous (distant) places / adventures Advertising / promotions Family ties Prestige of long haul Luxury travel</p>	<b>5</b>

Question	Answer	Marks
6(c)	<p><b>Explain the problems that tourism may cause in an area.</b></p> <p>Credit the following at 1 mark each</p> <p>Seasonal unemployment  Visual, water, air, noise pollution (up to 2 marks for extra detail)  Commercialises local traditions  Locals leave traditional jobs for jobs in tourism / loss of tradition  Money may leave area with the power of international hotel chains  Possible increase in crime / vandalism  Offending locals / unacceptable dress  Deforestation / effects on natural environment  Local services under stress  Traffic congestion  Overcrowding  Higher prices for locals  Damage caused by tourists</p>	<b>5</b>
6(d)	<p><b>Explain the need to attract tourists to Brunei and describe the methods used to attract them. Give examples to support your answer.</b></p> <p>Levels marking</p> <p><u>Examples of simple statements</u>  (Allow detail of the attractions to max, but [A] needs idea of development or promotion)  Tourism needs to be developed to offset eventual falling oil income  Brunei needs to diversify its economy  Temburong forest area is a national park  Brunei tourist industry advertises in overseas magazines</p> <p><u>Examples of developed statements</u>  The money generated through increasing tourist numbers will increase employment so offset any deterioration of the oil industry  Kampong Ayer is a major tourist attraction and is the largest water village in the world  Trade shows held in other countries advertise the attractions of Brunei and encourage people to visit  It is important to diversify the economy into activities like tourism as Brunei is too dependent on the oil industry</p>	<b>7</b>