



Mark scheme

OCR

Oxford Cambridge
and RSA

**GCSE (9-1) Geography A
(Geographical Themes)
J383/02 The World Around Us**

Date -

Morning/Afternoon

Duration: 1 hour

Grade Boundaries	Marks	%
9	40-51	77%
8	36 - 39	70% - 76%
7	32 - 35	62% - 69%
6	28 - 31	55% - 61%
5	25 - 27	49% - 54%
4	21 - 24	41% - 48%
3	15 - 20	29% - 40%
2	9 - 14	18% - 28%
1	4 - 8	7% - 17%
U	0 - 3	0 - 6%

Spelling, punctuation and grammar (SPaG) assessment grid

High performance 3 marks

Candidates spell, punctuate and use rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.

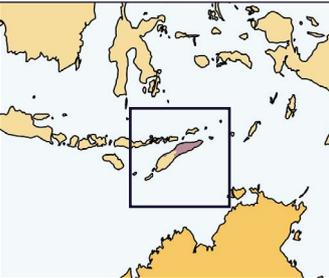
Intermediate performance 2 marks

Candidates spell, punctuate and use rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility.

Threshold performance 1 marks

Candidates spell, punctuate and use rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately.

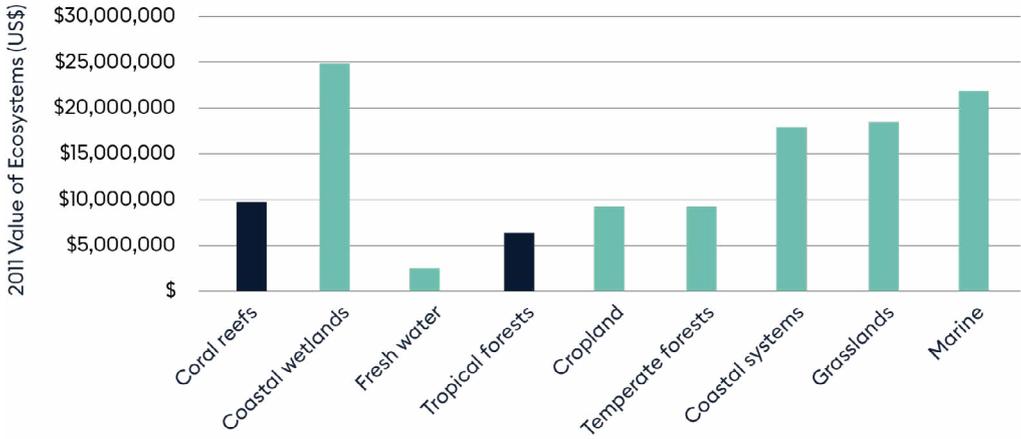
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<p>Q1 [2]</p>	<p>Use Figure 1 to describe the global distribution of coral reefs.</p> <p>2 x 1 marks One mark for each accurate point of description. For 2 marks responses must refer to more than one location. No credit for 'spread all over the world' No credit for explanations. Indicative content.</p> <ul style="list-style-type: none"> • Highest concentration of coral reefs found in SE Asia in the Pacific Ocean. • They are concentrated between the lines Tropic of Cancer (23.5 degrees N) and Tropic of Capricorn (23.5 degrees S).
<p>Q2 [1]</p>	<p>Identify Timor-Leste on the map of Asia below.</p>  <p>1 mark. Indication needs to be clear – a circle or shading. No mark if it is not accurate. No mark if area identified is excessively large.</p>
<p>Q3 [3]</p>	<p>Using figure 1 name three more countries which have coral reefs.</p> <p>3 x 1 marks One mark for each country named. Indicative Content:</p> <ul style="list-style-type: none"> • Indonesia • Australia • Mexico • Jamaica • USA (Florida) • Philippines • Brazil • Hawaii • Egypt • India <p>No mark for Timor-Leste.</p>
<p>Q4 [2]</p>	<p>Identify two features of the physical environment which are necessary for a coral reef environment.</p> <p>2x1</p> <ul style="list-style-type: none"> • Warm oceans – generally sea temperature of between 20-30 degrees Celsius. • They like very salty water ranging from (32 to 42 parts per thousand). • Clear water – need sunlight to survive.
<p>Q5 [4]</p>	<p>Describe and explain the formation of a coral atoll. You may use a diagram to help you.</p> <p>2 X 2 marks 1 mark for each description, 1 mark for each explanation. Credit labelled diagram. Correct labels may be credited. Do not double credit the same information in the diagram and in the text. 2 marks max for a accurate diagram.</p> <ul style="list-style-type: none"> • Answer should include reference to a Volcanic Island and the changes that happen to the volcanic island, fringe reef, barrier reef as well as the coral atoll.
<p>Q6 [4]</p>	<p>Describe and explain two human threats to coral reefs</p> <p>2x2 marks One mark for identification of the human threats. Allow single words e.g. scuba diving, deforestation of mangrove forests, pollution, farming (use of fertilizers), dredging, fishing. Development mark for explanation of how it is a threat to the coral reefs.</p>
<p>Q7 [1]</p>	<p>Define the term 'ocean acidification'</p> <p>1 mark for accurate definition</p> <ul style="list-style-type: none"> • Carbon dioxide dissolves in water to form carbonic acid, as the amount of carbonic acid in oceans decreases the pH levels decrease, resulting in a reduction in the corals ability to create calcium carbonate skeletons from the available carbonate acid.

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<p>Q8 [4]</p>	<p>Using a named example explain two reasons why coral reefs are important.</p> <p>2 x 2 marks One mark for simple point of explanation. Second mark for development of explanation. Maximum of 2 marks if no reference to named location. Some answers could have reference to but not limited to the following:</p> <ul style="list-style-type: none"> • Source of food – subsistence fishing • Source of income – fishing and tourism • Coastal defense – reduce the energy from waves – act like an offshore breakwater. • Source of building material – limestone • Regulate nutrient cycle, carbon cycle • Habitat to thousands of species and key to global food webs. (most divers ecosystem on earth) 					
<p>Q9 [4]</p>	<p>Describe and explain how coral reefs store carbon dioxide.</p> <p>2 x 2 1 mark for each description and 1 mark for each explanation Response must include reference to the use of carbon dioxide to create the calcium carbonate that is the skeleton of coral reefs, which is necessary for health coral reefs to grow.</p>					
<p>Q10 [6+3]</p>	<p>Using a named example evaluate the positive and negative impacts that tourism has had on the coral reef environment. You should refer to place specific detail in your answer.</p> <p>The response is to be marked holistically. Examiners to label overall level awarded at the end of the response. 0 marks – No response or no response worthy of credit.</p> <table border="1" data-bbox="244 943 1487 1451"> <tr> <td data-bbox="244 943 657 1451"> <p>Level 1 [1-2] Basic statements that describe impacts of tourism on a named coral reef environment. Limited development of ideas. Little or no reference to place specific detail. Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinders communication</p> </td> <td data-bbox="657 943 1070 1451"> <p>Level 2 [3-4] Some evaluation of positive and negative impacts in a named coral reef environment with some developed statements which explain the impacts. Some place detail relevant to named environment. Written work is legible, and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly.</p> </td> <td data-bbox="1070 943 1487 1451"> <p>Level 3 [5-6] Comprehensive evaluation of both positive and negative impacts tourism has had on a named coral reef environment. Developed statements fully explaining different impacts. Accurate reference to place specific detail related to named environment. Evaluative statement makes judgement about extent of positive and negative impacts. Written work is legible, and spelling, punctuation and grammar are accurate. Meaning is communicated very clearly.</p> </td> </tr> </table>			<p>Level 1 [1-2] Basic statements that describe impacts of tourism on a named coral reef environment. Limited development of ideas. Little or no reference to place specific detail. Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinders communication</p>	<p>Level 2 [3-4] Some evaluation of positive and negative impacts in a named coral reef environment with some developed statements which explain the impacts. Some place detail relevant to named environment. Written work is legible, and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly.</p>	<p>Level 3 [5-6] Comprehensive evaluation of both positive and negative impacts tourism has had on a named coral reef environment. Developed statements fully explaining different impacts. Accurate reference to place specific detail related to named environment. Evaluative statement makes judgement about extent of positive and negative impacts. Written work is legible, and spelling, punctuation and grammar are accurate. Meaning is communicated very clearly.</p>
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<p>Q11 [2]</p>	<p>1. Identify two economic impacts of the destruction of coral reefs.</p> <p>2 x 1 marks No credit for social or environmental impacts.</p> <ul style="list-style-type: none"> • Fish stocks are depleting – in Derawan there has been a 74% decrease of fish stocks. • Coral reefs provide a natural breakwater. The cost of implementing artificial defenses would cost millions. • As fish stocks decrease food security decreases and poverty may increase. 					

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<p>Q12 [2]</p>	<p>Use the information in the table in Figure 3 to complete the graph in Figure 2</p> <p>2 x 1 marks</p>  <table border="1"> <caption>2011 Value of Ecosystems (US\$)</caption> <thead> <tr> <th>Ecosystem</th> <th>Value (US\$)</th> </tr> </thead> <tbody> <tr> <td>Coral reefs</td> <td>9,862,972</td> </tr> <tr> <td>Coastal wetlands</td> <td>24,811,904</td> </tr> <tr> <td>Fresh water</td> <td>2,502,400</td> </tr> <tr> <td>Tropical forests</td> <td>6,770,556</td> </tr> <tr> <td>Cropland</td> <td>9,308,024</td> </tr> <tr> <td>Temperate forests</td> <td>9,420,411</td> </tr> <tr> <td>Coastal systems</td> <td>17,881,744</td> </tr> <tr> <td>Grasslands</td> <td>18,405,388</td> </tr> <tr> <td>Marine</td> <td>21,912,000</td> </tr> </tbody> </table>	Ecosystem	Value (US\$)	Coral reefs	9,862,972	Coastal wetlands	24,811,904	Fresh water	2,502,400	Tropical forests	6,770,556	Cropland	9,308,024	Temperate forests	9,420,411	Coastal systems	17,881,744	Grasslands	18,405,388	Marine	21,912,000
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<p>Q13 [2]</p>	<p>Use the information in the graph to complete the table.</p> <p>2 x 1 marks</p> <p>Answer needs to be within the range - Fresh water – 2,450,000 – 2,650,000 Temperate forest – 9,350,000 – 9,650,000</p> <table border="1"> <thead> <tr> <th>Ecosystem</th> <th>Coral Reefs</th> <th>Coastal Wetlands</th> <th>Fresh water</th> <th>Tropical Forests</th> <th>Cropland</th> </tr> </thead> <tbody> <tr> <td>Value (US\$)</td> <td>9,862,972</td> <td>24,811,904</td> <td>2,502,400</td> <td>6,770,556</td> <td>9,308,024</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Temperate Forest</th> <th>Coastal systems</th> <th>Grasslands</th> <th>Marine</th> </tr> </thead> <tbody> <tr> <td>9,420,411</td> <td>17,881,744</td> <td>18,405,388</td> <td>21,912,000</td> </tr> </tbody> </table>	Ecosystem	Coral Reefs	Coastal Wetlands	Fresh water	Tropical Forests	Cropland	Value (US\$)	9,862,972	24,811,904	2,502,400	6,770,556	9,308,024	Temperate Forest	Coastal systems	Grasslands	Marine	9,420,411	17,881,744	18,405,388	21,912,000
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<p>Q14 [2]</p>	<p>Describe the changes in shallow reefs shown in Figure 4.</p> <p>2 x 1 mark. 1 mark for general statement. Use of data needed for full marks.</p>																				
<p>Q15 [6+3]</p>	<p>To what extent are MPAs the most effective method of coral reef management.</p> <p>The response is to be marked holistically. Examiners to label overall level awarded at the end of the response.</p> <p>0 marks – No response or no response worthy of credit.</p> <p>For level 3 responses must include specific knowledge of the MPA used in Timor-Leste and other management strategies used in specific locations.</p> <table border="1"> <thead> <tr> <th>Level 1 (1-2)</th> <th>Level 2 (3-4)</th> <th>Level 3 (5-6)</th> </tr> </thead> <tbody> <tr> <td>Demonstrates limited knowledge and understanding of management strategies used to protect coral reefs. No named examples. Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinders communication.</td> <td>Demonstrates good knowledge and understanding of what an MPA is and other management strategies. Limited reference to named examples. Attempts to give a balanced argument. Written work is legible, and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly.</td> <td>Demonstrates comprehensive knowledge and understanding of what an MPA is and how is being used in Timor-Leste as well as other management strategies used in other named locations. Positives and negatives of the MPA and at least one other management strategy required. Written work is legible, and spelling, punctuation and grammar are accurate. Meaning is communicated very clearly.</td> </tr> </tbody> </table>	Level 1 (1-2)	Level 2 (3-4)	Level 3 (5-6)	Demonstrates limited knowledge and understanding of management strategies used to protect coral reefs. No named examples. Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinders communication.	Demonstrates good knowledge and understanding of what an MPA is and other management strategies. Limited reference to named examples. Attempts to give a balanced argument. Written work is legible, and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly.	Demonstrates comprehensive knowledge and understanding of what an MPA is and how is being used in Timor-Leste as well as other management strategies used in other named locations. Positives and negatives of the MPA and at least one other management strategy required. Written work is legible, and spelling, punctuation and grammar are accurate. Meaning is communicated very clearly.														
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