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**GEOGRAPHY**

**9696/32**

Paper 3 Advanced Physical Geography Options

**May/June 2019**

MARK SCHEME

Maximum Mark: 60

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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.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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**Cambridge Assessment**  
International Education

**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.

Answer questions from **two** different options.

### Tropical environments

If answering this option, answer Question 1 and **either** Question 2 **or** Question 3.

Question	Answer	Marks
1(a)	<p><b>Fig. 1.1 shows changes in tropical vegetation with distance from the Equator.</b></p> <p><b>Describe the changes in tropical vegetation shown in Fig. 1.1.</b></p> <p>The main changes from the Equator are (accept the obverse):</p> <ul style="list-style-type: none"> <li>• decreasing height of vegetation</li> <li>• decreasing density of vegetation</li> <li>• changing vegetation type and structure</li> <li>• decreasing number of tree species</li> <li>• increasing vertical depth of root networks</li> </ul> <p>Four points for 4 marks or three points plus 1 mark for the use of data for 4 marks.</p>	4
1(b)	<p><b>Explain the changes described in (a).</b></p> <p>The explanation will be mostly in terms of decreasing rainfall totals and changing lengths of wet and dry seasons from the Equator and the effect on vegetation type and structure.</p> <p>Award marks based on the quality of explanation and breadth of the response using the marking levels below.</p> <p><b>Level 3 (5–6)</b> Response addresses the main demand in the question. There is good explanation of the changing vegetation sequence. Response is well founded in detailed knowledge and strong conceptual understanding of the topic. Examples used are appropriate and integrated effectively into the response.</p> <p><b>Level 2 (3–4)</b> Response addresses the question in a limited manner. Response may be lacking in detailed explanation of the vegetation transect. Response develops on a largely secure base of knowledge and understanding. Examples may lack detail or development.</p> <p><b>Level 1 (1–2)</b> Response comprises one or two descriptive points about the controls on the vegetation. Knowledge is basic and understanding may be inaccurate. Examples are in name only or lacking entirely.</p> <p><b>Level 0 (0)</b> No creditable response.</p>	6

Question	Answer	Marks
2	<p><b>With the aid of a case study from <u>either</u> a rainforest ecosystem <u>or</u> a savanna ecosystem, describe some of the problems of sustainable management and evaluate the attempted solutions.</b></p> <p>Candidates are free to develop their own approach to the question and responses will vary depending on the example(s) chosen. Whichever approach is chosen, essays which describe the problems of sustainable management and evaluate the attempted solutions will be credited. There may be detailed consideration of one or more examples or a broadly conceived response, drawing on several examples to show the factors involved.</p> <p>The key to a good answer is the detail provided with respect to the chosen specific case study. The problems and possible solutions to sustainable management will depend on the examples and environment chosen. But in either case it will revolve around climatic, vegetation and soil characteristics and the problems these cause for sustainable management. Award marks based on the quality of the response using the marking levels below.</p> <p><b>Level 4 (16–20)</b> Response thoroughly discusses the chosen case study in the chosen environment. Response demonstrates a well founded understanding of the characteristics of the chosen example and why these present problems for sustainable management. An effective and sustained evaluation with a sound conclusion. Response is well founded in detailed exemplar knowledge and strong conceptual understanding of the topic. Examples used are appropriate and integrated effectively into the response.</p> <p><b>Level 3 (11–15)</b> Response discusses the chosen case study in the chosen environment, comprising some understanding of why the environment presents problems for sustainable management. Response is broadly evaluative in character, comprising some explanatory or narrative content and a conclusion. Response develops on a largely secure base of knowledge and understanding with the use of example(s).</p> <p><b>Level 2 (6–10)</b> Response demonstrates some knowledge and understanding of the problems of sustainable management of the chosen case study, but the response may be unbalanced. Response is mainly descriptive or explanatory in approach and contains a brief or thinly supported evaluation. Responses without the use of example(s) to support the response will not get above the middle of Level 2 (8 marks).</p> <p><b>Level 1 (1–5)</b> Response makes a few general points about the problems of sustainable management of the chosen environment but reference to a specific case study will be limited. A descriptive response comprising a few simple points. Knowledge is basic and understanding may be poor and lack relevance to the question set.</p> <p><b>Level 0 (0)</b> No creditable response.</p>	20

Question	Answer	Marks
3	<p><b>Assess the roles of weathering and other factors in the formation of granite landforms in tropical environments.</b></p> <p>Candidates are free to develop their own approach to the question and responses will vary depending on the example(s) chosen. Whichever approach is chosen, essays which assess the roles of weathering and other factors in the formation of granite landforms will be credited. There may be detailed consideration of one or more examples or a broadly conceived response, drawing on several examples to show the factors involved.</p> <p>The main granite landforms in tropical environments are inselbergs, bornhardts (ruwares), castle koppies (kasteel kopjes) and tors. Weathering is mostly chemical, especially hydrolysis acting on the feldspars in the granite, but physical weathering, such as unloading (dilatation) creating joints, and insolation weathering are also relevant. The main 'other factors' will relate to the nature of granite (mineralogy and structure, e.g. joint networks), topography and erosion stripping the weathered debris to reveal the landforms. Some candidates will discuss etchplains and possibly parallel retreat to produce inselbergs. There needs to be a realistic evaluation of the various factors. Award marks based on the quality of the response using the marking levels below.</p> <p><b>Level 4 (16–20)</b> Response thoroughly discusses the nature of granite landforms. It demonstrates a well founded understanding of the roles of weathering and other factors in the development of the landforms. An effective and sustained evaluation with a sound conclusion. Response is well founded in detailed exemplar knowledge and strong conceptual understanding of the topic. Examples used are appropriate and integrated effectively into the response.</p> <p><b>Level 3 (11–15)</b> Response discusses the nature of granite landforms. Response is broadly evaluative in character, comprising some understanding of the nature of granite landforms and the role of weathering and other factors in their development. Response develops on a largely secure base of knowledge and understanding with the use of example(s).</p> <p><b>Level 2 (6–10)</b> Response demonstrates some knowledge and understanding of the nature of the granite landforms and the role of weathering and other factors in their development. Response is mainly descriptive or explanatory in approach and contains a brief or thinly supported evaluation. Responses without the use of example(s) to support the response will not get above the middle of Level 2 (8 marks).</p> <p><b>Level 1 (1–5)</b> Response makes a few general points about granite landforms and the role of weathering and other factors in their development. A descriptive response comprising a few simple points. Knowledge is basic and understanding may be poor and lack relevance to the question set.</p> <p><b>Level 0 (0)</b> No creditable response.</p>	20

**Coastal environments**

If answering this option, answer Question 4 and **either** Question 5 **or** Question 6.

Question	Answer	Marks
4(a)	<p><b>Fig. 4.1 shows the level of risk to coral reefs from local threats for three world regions.</b></p> <p><b>Compare the level of risk to coral reefs in the three world regions shown in Fig. 4.1.</b></p> <p>The main points in relation to other areas are:</p> <ul style="list-style-type: none"> <li>• Australia is dominated by a low risk with no very high risk</li> <li>• threats in the Pacific are mostly low risk with very limited high risk</li> <li>• Southeast Asia has high and very high risk equally balanced with a small proportion of low risk</li> <li>• any additional points based on relative significance of the threats</li> </ul> <p>There needs to be use of data (such as percentage values) for full marks.</p> <p>The emphasis is on comparison, thus if separate descriptions, maximum 2 marks.</p>	<b>4</b>

Question	Answer	Marks
4(b)	<p><b>Explain why coral reefs are at risk from <u>two</u> of the local threats identified in Fig. 4.1.</b></p> <p>There needs to be discussion of the conditions needed for coral growth. These conditions can then be discussed with respect to the nature of the local threats, such as overfishing, pollution and physical damage. There will be threats to aeration and cleanliness of the water as a result of land-based pollution (sediment, pesticides and fertilisers) and marine pollution. Physical damage may be the result of natural processes, such as storm surges, or human activity.</p> <p>Award marks based on the quality of explanation and breadth of the response using the marking levels below.</p> <p><b>Level 3 (5–6)</b> Response addresses the main demand in the question. There is good well balanced explanation of two threats to coral reefs. Response is well founded in detailed knowledge and strong conceptual understanding of the topic. Examples used are appropriate and integrated effectively into the response.</p> <p><b>Level 2 (3–4)</b> Response addresses the question in a limited manner. It may be unbalanced with respect to the two threats chosen for discussion. Response develops on a largely secure base of knowledge and understanding. Examples may lack detail or development.</p> <p><b>Level 1 (1–2)</b> Response comprises one or more basic points and may struggle to discuss two threats. The response addresses the question in outline only. Knowledge is basic and understanding may be inaccurate. Examples are in name only or lacking entirely.</p> <p><b>Level 0 (0)</b> No creditable response.</p>	<b>6</b>

Question	Answer	Marks
5	<p><b>Describe the main sources of coastal sediments. Assess how the characteristics of coastal sediments influence the formation of depositional landforms.</b></p> <p>Candidates are free to develop their own approach to the question and responses will vary depending on the example(s) chosen. Whichever approach is chosen, essays which assess how the characteristics of coastal sediments influence the formation of depositional landforms will be credited. There may be detailed consideration of one or more examples or a broadly conceived response, drawing on several examples to show the factors involved.</p> <p>Sediment nature and especially size depend on the source. Rivers bring down very fine sediments which may lead to salt marsh development. Erosion of rock cliffs may lead to coarser sediment which can be carried by longshore drift leading to a variety of depositional landforms. There may also be reference to coarse materials deposited offshore in northern latitudes, which are pushed on shore to produce shingle ridges. Reference should be made to a range of depositional landforms. Award marks based on the quality of the response using the marking levels below.</p> <p><b>Level 4 (16–20)</b> Response thoroughly discusses the nature of sediment sources and its influence on the formation of depositional landforms. An effective and sustained evaluation with a sound conclusion. Response is well founded in detailed exemplar knowledge and strong conceptual understanding of the topic. Examples used are appropriate and integrated effectively into the response.</p> <p><b>Level 3 (11–15)</b> Response discusses the nature of sediment sources and its influence on the formation of depositional landforms. Response is broadly evaluative in character, comprising some explanatory or narrative content and a conclusion. Response develops on a largely secure base of knowledge and understanding with the use of example(s).</p> <p><b>Level 2 (6–10)</b> Response demonstrates some knowledge and understanding of the nature of sediment sources but may be unbalanced with respect to the influence of these sediments on depositional landform development. The range of landforms discussed may be limited. Response is mainly descriptive or explanatory in approach and contains a brief or thinly supported evaluation. Responses without the use of example(s) to support the response will not get above the middle of Level 2 (8 marks).</p> <p><b>Level 1 (1–5)</b> Response makes a few general points about the nature of sediment sources. A descriptive response comprising a few simple points. Knowledge is basic and understanding may be poor and lack relevance to the question set.</p> <p><b>Level 0 (0)</b> No creditable response.</p>	20



Question	Answer	Marks
6	<p><b>‘Hard engineering is more effective than soft engineering in managing coasts sustainably.’</b></p> <p><b>With the aid of one or more case studies, how far do you agree?</b></p> <p>Candidates are free to develop their own approach to the question and responses will vary depending on the example(s) chosen. Whichever approach is chosen, essays which assess hard and soft engineering techniques will be credited. There may be detailed consideration of one or more examples or a broadly conceived response, drawing on several examples to show the factors involved.</p> <p>The answer will depend on the chosen case study or studies and the detail provided. There needs to be a discussion of both hard and soft engineering procedures and an evaluation of their relative sustainability. The case study or studies need to be detailed and relevant to the discussion.</p> <p>Award marks based on the quality of the response using the marking levels below.</p> <p><b>Level 4 (16–20)</b> Response thoroughly discusses a range of both hard and soft engineering techniques, assessing their expense and sustainability. An effective and sustained evaluation with a sound conclusion. Response is well founded in detailed exemplar knowledge and strong conceptual understanding of the topic. Examples used are appropriate and integrated effectively into the response.</p> <p><b>Level 3 (11–15)</b> Response discusses the different approaches to hard and soft engineering and makes some links with expense and sustainability. Response is broadly evaluative in character, comprising some explanatory or narrative content and a conclusion. Response develops on a largely secure base of knowledge and understanding with the use of example(s).</p> <p><b>Level 2 (6–10)</b> Response demonstrates some knowledge and understanding of a limited range of both hard and soft engineering approaches. Response is mainly descriptive or explanatory in approach and contains a brief or thinly supported evaluation. Responses without the use of example(s) to support the response will not get above the middle of Level 2 (8 marks).</p> <p><b>Level 1 (1–5)</b> Response makes a few general points about hard and soft engineering approaches but does not address the question or come to a convincing conclusion. A descriptive response comprising a few simple points. Knowledge is basic and understanding may be poor and lack relevance to the question set.</p> <p><b>Level 0 (0)</b> No creditable response.</p>	20

**Hazardous environments**

If answering this option, answer Question 7 and **either** Question 8 **or** Question 9.

Question	Answer	Marks
7(a)	<p><b>Fig. 7.1 shows the global distribution of volcanoes.</b></p> <p><b>Describe the distribution of volcanoes shown in Fig. 7.1.</b></p> <p>The main points are:</p> <ul style="list-style-type: none"> <li>• major linear concentrations down the west coast of the Americas/the coast of east Asia (the Pacific Ring of Fire)</li> <li>• a linear zone in mid-Atlantic</li> <li>• linear line in east Africa</li> <li>• central/eastern Mediterranean</li> <li>• scattered numbers in the oceans/mid-continent</li> <li>• associated with relevant plate boundaries (constructive/destructive)</li> </ul> <p>Chains are an alternative to linear.</p> <p>Any four points for 4 marks but has to have a global range.</p>	4
7(b)	<p><b>Explain the distribution of volcanoes described in (a).</b></p> <p>Distribution is largely governed by plate tectonics, namely convergent and divergent plate boundaries. There needs to be discussion of both main elements. Answers might also mention hot spots with respect to Hawaii and possibly Galapagos Islands and the Canary Islands. Some explanation of volcanoes not associated with plate boundaries is required for a Level 3 answer.</p> <p>Award marks based on the quality of explanation and breadth of the response using the marking levels below.</p> <p><b>Level 3 (5–6)</b> Response addresses the main demand in the question. There is good explanation of the distribution of the volcanoes in relation to plate tectonics. Response is well founded in detailed knowledge and strong conceptual understanding of the topic. Examples used are appropriate and integrated effectively into the response.</p> <p><b>Level 2 (3–4)</b> Response addresses the question in a limited manner. The explanation for the global distribution of the volcanoes will be partial, perhaps limited to one type of plate boundary. Response develops on a largely secure base of knowledge and understanding. Examples may lack detail or development.</p> <p><b>Level 1 (1–2)</b> Response comprises one or more basic explanatory points which address the question in outline only. Knowledge is basic and understanding may be inaccurate. Examples are in name only or lacking entirely.</p> <p><b>Level 0 (0)</b> No creditable response.</p>	6

Question	Answer	Marks
8	<p><b>Describe the hazards resulting from earthquakes. Assess the extent to which hazards resulting from earthquakes can be managed.</b></p> <p>Candidates are free to develop their own approach to the question and responses will vary depending on the example(s) chosen. Whichever approach is chosen, essays which assess the extent to which hazards resulting from earthquakes can be managed will be credited. There may be detailed consideration of one or more examples, or a broadly conceived response, drawing on several examples to show the factors involved.</p> <p>The main hazards associated with earthquakes are primary ground shaking with building and infrastructure collapse. Subsequently secondary hazards may occur such as liquefaction, tsunami and landslides. Consideration of management will depend on the location of the earthquake and on the hazards discussed, but preparation would also form a major part of the assessment.</p> <p>Award marks based on the quality of the response using the marking levels below.</p> <p><b>Level 4 (16–20)</b> Response thoroughly describes the hazards associated with earthquakes. It demonstrates a well founded understanding of the nature of those hazards and the extent to which those hazards can be managed. An effective and sustained evaluation with a sound conclusion. Response is well founded in detailed exemplar knowledge and strong conceptual understanding of the topic. Examples used are appropriate and integrated effectively into the response.</p> <p><b>Level 3 (11–15)</b> Response describes the hazards associated with earthquakes and the extent to which they can be managed. Response is broadly evaluative in character, comprising some explanatory or narrative content and a conclusion. Response develops on a largely secure base of knowledge and understanding with the use of example(s).</p> <p><b>Level 2 (6–10)</b> Response demonstrates some knowledge and understanding of hazards associated with earthquakes and the extent to which the hazards can be managed but may be unbalanced with respect to evaluation. Response is mainly descriptive or explanatory in approach and contains a brief or thinly supported evaluation. Responses without the use of example(s) to support the response will not get above the middle of Level 2 (8 marks).</p> <p><b>Level 1 (1–5)</b> Response makes a few general points about earthquake hazards but little evaluation of the extent to which the hazards can be managed. A descriptive response comprising a few simple points. Knowledge is basic and understanding may be poor and lack relevance to the question set.</p> <p><b>Level 0 (0)</b> No creditable response.</p>	20

Question	Answer	Marks
9	<p><b>With the aid of examples, assess how prediction, preparedness and monitoring of tornadoes can reduce their impacts on lives and property.</b></p> <p>Candidates are free to develop their own approach to the question and responses will vary depending on the example(s) chosen. Whichever approach is chosen, essays which assess how prediction, preparedness and monitoring can reduce the impacts of tornadoes will be credited. There may be detailed consideration of one or more examples or a broadly conceived response, drawing on several examples to show the factors involved.</p> <p>Tornadoes are small scale atmospheric disturbances. The main hazards associated with tornadoes are high winds, intense rainfall and often hailstorms and marked pressure changes. There may be secondary hazards associated with the aftermath of the primary hazards. All three elements, prediction, preparedness and monitoring, need assessing to reach Level 4. Award marks based on the quality of the response using the marking levels below.</p> <p><b>Level 4 (16–20)</b> Response thoroughly discusses the nature of tornadoes and their impacts. It demonstrates a well founded understanding of the extent to which the three elements in the question can help to reduce the impacts. An effective and sustained evaluation with a sound conclusion. Response is well founded in detailed exemplar knowledge and strong conceptual understanding of the topic. Examples used are appropriate and integrated effectively into the response.</p> <p><b>Level 3 (11–15)</b> Response discusses one or more aspects of prediction, preparedness and monitoring and makes some links with reducing the impacts of tornado movements on lives and property. Response is broadly evaluative in character, comprising some explanatory or narrative content and a conclusion. Response develops on a largely secure base of knowledge and understanding with the use of example(s).</p> <p><b>Level 2 (6–10)</b> Response demonstrates some knowledge and understanding of prediction, preparedness and monitoring but the links with reducing the impacts of tornadoes on lives and property are not developed. Response is mainly descriptive or explanatory in approach and contains a brief or thinly supported evaluation. Responses without the use of example(s) to support the response will not get above the middle of Level 2 (8 marks).</p> <p><b>Level 1 (1–5)</b> Response makes a few general points about the nature of tornadoes but little evaluation of the extent to which the three elements can help to reduce impacts. A descriptive response comprising a few simple points. Knowledge is basic and understanding may be poor and lack relevance to the question set.</p> <p><b>Level 0 (0)</b> No creditable response.</p>	20

**Hot arid and semi-arid environments**

If answering this option, answer Question 10 and **either** Question 11 **or** Question 12.

Question	Answer	Marks
10(a)	<p><b>Fig. 10.1 is a photograph which shows vegetation in the Sonoran Desert, USA.</b></p> <p><b>Describe the characteristics of the vegetation shown in Fig. 10.1.</b></p> <p>Points that can be made are :</p> <ul style="list-style-type: none"> <li>• cacti (mainly Saguaro) with spiny, succulent features</li> <li>• many different forms of cacti</li> <li>• main cacti are tall and thin</li> <li>• sparseness of the vegetation</li> <li>• low scrubby bushes with any relevant characteristic such as colour, leaf size, etc.</li> <li>• dry, tussock shrubs</li> </ul> <p>Four relevant points for 4 marks.</p> <p>Only credit features that are shown in Fig. 10.1.</p>	<b>4</b>

Question	Answer	Marks
10(b)	<p><b>Explain how vegetation, such as that shown in Fig. 10.1, has adapted to aridity.</b></p> <p>The vegetation has become adapted to aridity, a combination of drought and heat. So discussion needs to be in terms of conserving water and mechanisms to obtain as much water as possible. These may include spreading and deep root networks, succulent nature, stomata on undersides of leaves, waxy, shiny surfaces and hairs. Pale coloured surfaces reflecting heat. Many species are ephemeral and only grow and seed when water is available and may also be resistant to high salt content in the water (halophytic).</p> <p>Award marks based on the quality of explanation and breadth of the response using the marking levels below.</p> <p><b>Level 3 (5–6)</b> Response addresses the main demand in the question. There is good explanation as to how the vegetation is adapted to aridity. Response is well founded in detailed knowledge and strong conceptual understanding of the topic. Examples used are appropriate and integrated effectively into the response.</p> <p><b>Level 2 (3–4)</b> Response addresses the question in a limited manner. Response may be lacking in detailed explanation of the adaptation of vegetation to aridity. Response develops on a largely secure base of knowledge and understanding. Examples may lack detail or development.</p> <p><b>Level 1 (1–2)</b> Response comprises one or more points which address the question in outline only. Knowledge is basic and understanding may be inaccurate. Examples are in name only or lacking entirely.</p> <p><b>Level 0 (0)</b> No creditable response.</p>	<b>6</b>

Question	Answer	Marks
11	<p><b>To what extent have landforms of hot arid and semi-arid environments been developed by present-day processes?</b></p> <p>Candidates are free to develop their own approach to the question and responses will vary depending on the example(s) chosen. Whichever approach is chosen, essays which assess the extent to which landforms have been developed by present-day processes will be credited. There may be detailed consideration of one or more examples or a broadly conceived response, drawing on several examples to show the factors involved.</p> <p>This needs a straightforward analysis of the landforms of hot arid and semi-arid environments in relation to current and past processes of erosion and deposition. The general conclusion might be that landforms created by fluvial processes, such as wadis, pediments, alluvial fans and playas, are essentially relict with present-day processes only able to modify them. Landforms which are the result of wind action, such as dunes, yardang, zeugen and ventifacts, may be more related to current processes.</p>	<b>20</b>

Question	Answer	Marks
11	<p>Award marks based on the quality of the response using the marking levels below.</p> <p><b>Level 4 (16–20)</b> Response thoroughly discusses the nature and range of the landforms of hot arid and semi-arid environments. It demonstrates a well founded understanding of the role of processes, past and present, in the development of those landforms. An effective and sustained evaluation with a sound conclusion. Response is well founded in detailed exemplar knowledge and strong conceptual understanding of the topic. Examples used are appropriate and integrated effectively into the response.</p> <p><b>Level 3 (11–15)</b> Response discusses the nature and range of the landforms of hot arid and semi-arid environments and demonstrates a sound understanding of the role of processes, past and present, in the development of those landforms, though it may be lacking in some detail. Response is broadly evaluative in character, comprising some explanatory or narrative content and a conclusion. Response develops on a largely secure base of knowledge and understanding with the use of example(s).</p> <p><b>Level 2 (6–10)</b> Response demonstrates some knowledge and understanding of the nature of the landforms of hot arid and semi-arid environments and the role of past and current processes in their development. The answer may be unbalanced with respect to evaluation. Response is mainly descriptive or explanatory in approach and contains a brief or thinly supported evaluation. Responses without the use of example(s) to support the response will not get above the middle of Level 2 (8 marks).</p> <p><b>Level 1 (1–5)</b> Response makes a few general points about the nature of landforms in hot arid and semi-arid environments but with little evaluation of the extent of the role of past and current processes in their development. A descriptive response comprising a few simple points. Knowledge is basic and understanding may be poor and lack relevance to the question set.</p> <p><b>Level 0 (0)</b> No creditable response.</p>	



Question	Answer	Marks
12	<p><b>Evaluate the role of pressure and wind systems in the global distribution of hot arid and semi-arid environments.</b></p> <p>Candidates are free to develop their own approach to the question and responses will vary depending on the example(s) chosen. Whichever approach is chosen, essays which evaluate the role of pressure and wind systems will be credited. There may be detailed consideration of one or more examples, or a broadly conceived response, drawing on several examples to show the factors involved.</p> <p>Pressure will be significant in hot arid and semi-arid environments caused by the descending limb of the Hadley cell such as over the Sahara. Wind systems will be more important in areas governed by the rain shadow effect and possibly those areas affected by cold offshore currents and by continentality. There should be analysis of the global distribution of hot arid and semi-arid environments.</p> <p>Award marks based on the quality of the response using the marking levels below.</p> <p><b>Level 4 (16–20)</b> Response thoroughly discusses the nature of pressure and wind systems in explaining the global distribution of hot arid and semi-arid areas. An effective and sustained evaluation with a sound conclusion. Response is well founded in detailed exemplar knowledge and strong conceptual understanding of the topic. Examples used are appropriate and integrated effectively into the response.</p> <p><b>Level 3 (11–15)</b> Response discusses the nature of pressure and wind systems in explaining the global distribution of hot arid and semi-arid areas. Response is broadly evaluative in character, comprising some explanatory or narrative content and a conclusion. Response develops on a largely secure base of knowledge and understanding with the use of example(s).</p> <p><b>Level 2 (6–10)</b> Response demonstrates some knowledge and understanding of pressure and wind systems in explaining the global distribution of hot arid and semi-arid areas but is unbalanced. Response is mainly descriptive or explanatory in approach and contains a brief or thinly supported evaluation. Responses without the use of example(s) to support the response will not get above the middle of Level 2 (8 marks).</p> <p><b>Level 1 (1–5)</b> Response makes a few general points about pressure and wind systems in explaining the global distribution of hot arid and semi-arid areas. A descriptive response comprising a few simple points. Knowledge is basic and understanding may be poor and lack relevance to the question set.</p> <p><b>Level 0 (0)</b> No creditable response.</p>	<b>20</b>