

Mark Scheme (Results)

Summer 2010

GCE

GCE Geography (6GE03) Paper 1



Edexcel is one of the leading examining and awarding bodies in the UK and throughout the world. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers.

Through a network of UK and overseas offices, Edexcel's centres receive the support they need to help them deliver their education and training programmes to learners.

For further information, please call our GCE line on 0844 576 0025, our GCSE team on 0844 576 0027, or visit our website at www.edexcel.com.

If you have any subject specific questions about the content of this Mark Scheme that require the help of a subject specialist, you may find our **Ask The Expert** email service helpful.

Ask The Expert can be accessed online at the following link:

<http://www.edexcel.com/Aboutus/contact-us/>

Alternatively, you can speak directly to a subject specialist at Edexcel on our dedicated **Geography** telephone line: **0844 372 2185**

Summer 2010

Publications Code

UA023953

All the material in this publication is copyright

© Edexcel Ltd 2010

General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.
- Mark schemes will indicate within the table where, and which strands of QWC, are being assessed. The strands are as follows:

i) ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear

ii) select and use a form and style of writing appropriate to purpose and to complex subject matter

iii) organise information clearly and coherently, using specialist vocabulary when appropriate.

SECTION A

Please note, for all questions, indicative content is a guide to the most common content; other examples and approaches are possible and should be credited if appropriate.

Question Number	Question
1a	(a) Suggest the possible environmental consequences of the changes in electricity consumption shown. (10)

Indicative content

Figure 1 focuses on energy use for electricity consumption, not total energy use. Note that oil makes up a very small proportion of the total. Answers should focus on environmental consequences.

The future (from Shell oil) has mixed consequences, some good some bad:

- Overall energy consumption in terms of electricity production rises by 2050. The rise is dramatic, almost trebling the 2010 figure. This might suggest a very power hungry world; using lots of resources with consequences for the environment e.g. increased global warming and related environmental issues.
- While coal, oil and gas appear steady they have increased on the 2000 figure, almost doubling greenhouse gas emissions by 2050 (unless new technology e.g. 'clean coal' or Carbon Capture and Storage is used).
- There are possible issues with resource extraction to meet demand, especially non-conventional oil, and exploitation in sensitive regions such as the Arctic.
- The proportion of coal of total fossil fuels rises by 2050 to equal all power generation in 2000. As coal is the dirtiest and least energy efficient of the fossil fuels this could be a major negative for the environment and atmosphere - global warming, acid rain.
- Nuclear's contribution rises - less CO2 but issues of waste disposal and public fears over leaks etc. - these may be largely unfounded but are real concerns
- On the positive side is a large rise in renewable energy with less pollution, but still requiring significant amounts of resources to construct, and land e.g. wind farms (NIMBY issues) and HEP flooding people out of homes e.g. Three Gorges.

NB: In 1a and 1b some candidates are likely to be sidetracked into descriptive accounts of the current BP spill in the Gulf which could be relevant, but in some cases are likely to not be.

Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. A few general comments or focussed on one narrow issue; may misinterpret Figure or focus on one energy source only. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Structure is satisfactory. Some range of ideas, likely to mention positive and negative consequences; may have some detail in parts. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Structure is good. Good range and detail, recognises both positive and negative consequences. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare

Question Number	Question
1b	(b) Assess the degree of uncertainty over future global sources of energy supply. (15)

Indicative content

Expect a focus on fossil fuels but other sources are relevant of course:

Supply uncertainty might result from:

- There are key uncertainties over peak oil and gas; coal is likely to last much longer but oil and gas could peak relatively soon with consequences for supply and price. Uncertainty stems from geological factors and demand. Some countries e.g. the UK have already 'peaked'.
- The extent to which new fossil fuel resources are discovered (e.g. shale gas, new oil fields) and used (debates over deep water oil and sensitive areas e.g. the Arctic National Wildlife Refuge); debates over existing reserves and how accurately they are reported e.g. in the Middle East
- Political issues and even hazards (hurricanes) have a role as conflict or disaster can knock out supplies for months or years. Accidents e.g. Chernobyl can knock out supply.
- There is uncertainty about alternatives most often related to costs and the extent they might fall; complex competitive equation based on falling prices of alternatives versus cost of oil and gas.
- Choice may come into it, as to what is acceptable to a sceptical public e.g. the nuclear debate.
- Political concerns e.g. transmission of gas from Russia being disrupted by political machinations; safety of sea routes for oil e.g. piracy off Somalia
- Growing resource nationalism
- Adoption of domestic renewable sources such as solar panels could increase security
- Questions over new technologies e.g. will hydrogen work as a mass energy source, or will we / won't we get a new technology to replace fossil fuels.
- Could be related to uncertain demand e.g. the rise of the BRICs, or the extent to which energy efficiency technologies are adopted.

Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. A few ideas on energy security but with little depth or precision. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Structure is satisfactory. Some ideas but likely to have a narrow range and lacks focus on uncertainty. Explanations are usually clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	9-12	Structure is good. Range of ideas for uncertainty of supply, some balance and detail. Begins to assess. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	Carefully structured. Balanced, detailed account with a range of ideas on supply. Genuine assessment which addresses the issue of uncertainty. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number	Question
2a	(a) Explain how human interference in the water cycle can affect water availability (10)

Indicative content

Do not expect full coverage of the entire cycle, however good answers should be fairly comprehensive. Towards the lower end the water cycle may not feature and answers will focus on water availability.

- Precipitation levels can be altered by local factors such as forest clearance, which reduces evapotranspiration and leads to a drier climate; globally climate change may alter precipitation patterns so that some areas have reduced levels and others increased.
- River runoff can be altered by dam construction and abstraction for industry and domestic use, reducing availability in particular locations.
- Land use changes can alter infiltration rates which in the long term can have consequences for groundwater availability.
- Groundwater flow can be altered by over abstraction and groundwater mining lowering water tables beyond the reach of wells; in some cases over irrigation, and in urban areas, water tables may rise.
- Rivers, lakes and groundwater can become polluted which reduces the availability of useable water.
- Interference in cloud formation and precipitation e.g. use of silver iodide for cloud seeding in China and elsewhere.

Most candidates are likely to see the consequences of human interference as negative for water availability, but also credit interference that could lead to greater water availability, at least for some e.g. recharging aquifers, water transfers.

Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. Descriptive; will tend to cover Figure 2 without fully addressing the water cycle; a few generalised human activities. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Structure is satisfactory. Range of human activities which link to some parts of the water cycle and water availability, not always in depth. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Structure is good. Range of human activities in depth, with good physical terminology and clearly linked to water availability. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare

Question Number	Question
2b	(b) Using named examples, assess the potential for water supply to become a source of conflict. (15)

Indicative content

A range of situations can lead to conflict:

Internally:

- Between different users of the same water supply - for instance pressures on a single river or aquifer with a number of demands on it.
- The debate over privatisation of supplies versus public ownership; water as a right or a commodity.
- Where water is transferred from one region to another e.g. China south-north diversion or diversion in Spain, or on the Colorado.
- Conflict might emerge over environmental issues where water extraction exceeds levels required to sustain ecosystems.
- Pollution of water supplies can bring one user into conflict with another.

Internationally there are many examples where several nations place conflicting demands on the same water resource:

- River Nile (Egypt, Sudan, Ethiopia and other)
- River Jordan and aquifers in Israel / Palestine
- Yangtze headwaters in China

In some cases there is the potential for these conflicts to become serious, and even to lead to 'water wars'

Some candidates may argue, as part of their assessment, that conflict is not inevitable and that agreement can be reached locally or internationally e.g. The Mekong River Commission or on the Colorado.

Good candidates might argue that climate change could exacerbate these issues in the future.

Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. A few ideas on conflict but examples are weak and detail absent. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Structure is satisfactory. Descriptive focus on one or two examples with less clarity on conflict. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	9-12	Structure is good. A range of examples with some detail and a focus on how water supply could lead to conflict; begins to assess. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	Carefully structured. A range of detailed examples focussed on conflict related to water supply; genuine assessment of how likely or severe conflict is / could be. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number	Question
3a	(a) With reference to Figure 3 and your own knowledge, explain how the USA maintains its superpower status.(10)
	<p>Indicative content</p> <p>Expect weaker students to be reliant on Figure 3, better ones may move away from it. The general message is the global spread shown by the three maps, which is only really the case with the USA (although an EU map would be somewhat similar).</p> <p>Overseas aid:</p> <ul style="list-style-type: none"> All global regions are covered; some might spot that the map does not correspond to the worlds poorest countries and might be seen as to do with influence as much as development. Much aid goes to countries where the USA seeks to 'keep a lid' on troubled areas (Peru, Iraq, Haiti, Ethiopia). Some might argue aid is political, it buys friendship and influence (Pakistan, war on terror) <p>McDonald's:</p> <ul style="list-style-type: none"> A global TNC making money from all corners of the earth, expect the very poorest regions. A map of other USA companies would look similar; some might see it as spreading US culture and lifestyle as much as a money making enterprise. Comments might be made about the importance of global trade in maintaining economic power. <p>USA military:</p> <ul style="list-style-type: none"> A more traditional, direct influence - especially in hotspots such as the Middle East, horn of Africa and northern Andes. Could be seen as reassuring in some locations and threatening in others. The USA as the world's policeman. Accept arguments about directly protecting oil supplies and key trade routes (Suez, Hormuz, Panama, Malacca and Gate of Tears). <p>Credit use of other examples not shown e.g. Israel receives a great deal of US aid and other companies e.g. Starbucks could be used</p> <p>Candidates may broaden the discussion into e.g. into the role of IGOs (UN, IMF, WTO etc) in maintaining status, or the role of culture and media.</p>

Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. Relatively simplistic statements about how power is maintained; little reference to the Geography on Figure 3. Could be narrow. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Structure is satisfactory. Some explanations which refers to Figure 3; may be unbalanced. May begin to use own knowledge. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Structure is good. Sound explanations referring to Figure 3 in a balanced way and bringing in own real world knowledge. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.

Question Number	Question
3b	(b) To what extent is the USA's superpower status threatened by the emerging power of the BRICs (Brazil, Russia, India and China)? (15)

Indicative content

Note that there is no need to discuss all of the BRICs, although better candidates would be expected to refer to several in some detail. The approach could be to discuss each of the BRICs in turn, or to take a more thematic approach i.e. economy, energy, military power, political influence etc.

Brazil:

- Possibly the least threatening as its population and economy are relatively small; it is becoming a key regional player but lacks the military power to be a truly world player. Possibly a thorn in the USA's side in Latin America.

Russia:

- Complex situation as it is a key energy player, and has military might which exceeds its economic power; it remains relatively confrontational with the 'west'; some might see its importance and influence increasing.

India:

- In particular areas, e.g. IT and software, it is threatening the USA's grip on hi-tech industry and many USA companies have invested heavily there, with painful economic consequences i.e. outsourcing of jobs.

China:

- Probably the biggest threat due to its regional influence, role in the world economy, nuclear and space exploration status; it has knocked the USA of some top spots e.g. the 2008 Olympic medals table, the world biggest carbon emitter etc. Its wealth growth does translate into growing global economic influence; increasingly it acts like a superpower e.g. its resource forays into Africa and interference in foreign affairs e.g. Sudan.

Stronger candidates may take the view that the USA is hard to topple due to its numerous strengths e.g. demographically young population boosted by immigration, TNCs, role in R&D, technology, patents and dominance within IGOs. Some may refer to hard -v- soft or direct -v- indirect forms of power.

NB: All 4 BRICs do not need to be discussed to achieve L4

Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. Narrow focus, perhaps a few ideas on China and its growth. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Structure is satisfactory. Some discussion of the rise of some of the BRICS, may be descriptive but some reference to power and status. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	9-12	Structure is good. Refers to a range of BRICs with some details and discusses a range of aspects of power; some attempt to assess. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.

Level 4	13-15	Carefully structured. Detailed discussion, possibly thematic, which assesses the relative strength of some of the BRICs, and possibly the USA, and comes to a clear view. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.
---------	-------	--

Question Number	Question
4a	(a) Using Figure 4 and your own knowledge explain why some groups of people within a country have a lower level of development than others.(10)

Indicative content

Candidates should refer to Figure 4, although many will bring in their own examples. Responses that make no reference to Figure 4 will be self-penalising.

- On the map, rural areas do less well especially in the NW - areas closer the Dhaka tend have lower poverty rates; this might be explained by isolation, lack of resources and investment, plus migration out of the areas leaving a residual population behind
- Rural poverty is 55% compared to the national rate of 50% and urban rate of 40% - greater opportunities for work and income in cities. Dhaka has a much lower rate of 28% suggesting the capital has the greatest opportunities of all.
- Female headed households (suggests a widow / divorce etc.) are poorer, reasons could relate to women having to be mothers and try and work at the same time, reducing earning potential plus cultural issues.
- Accept physical factors reducing opportunities as NW Bangladesh is drier and suffers from droughts; for the Coastal region accept the impact of cyclones are possibly contributing to poverty.
- There is a (small) difference between religious groups (Muslim and Hindu) - the majority population in Muslim but it has the higher poverty rate.
- Accept general points about a lack of development in the developing world and its causes, but there must be some specific discussion of the resource also.
- Credit references to other countries, whatever their level of development, as long as the answer is focussed in 'groups of people' and the differences. The Indian caste system may feature.
- Credit reference to other groups such as male -v- female, or ethnic groups in South Africa
- Credit reference to relevant models e.g. Myrdal, core -periphery.

Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. A few general comments; may focus on one area only e.g. urban versus rural. Likely to be descriptive with few reasons. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Structure is satisfactory. Some range of ideas across map and data; some explanations although variable detail; may begin to use own knowledge. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Structure is good. Detailed explanations, referring to Fig 4 and own knowledge, which account for the differences in terms of differing opportunities. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare

Question Number	Question
4b	(b) Using named examples, assess the advantages and disadvantages of top-down and bottom-up development strategies.(15)
	Indicative content
	<p>The response should examine both approaches, giving examples of each. Impacts could be soc/eco/env etc, or may take a winners and losers approach. For L3 and L4 answers the chosen strategies should be chosen appropriately. Weaker candidates will tend to take a more simplistic view i.e. bottom up is always best; better candidates should argue more carefully and perhaps recognise the complexity of the issue.</p> <p>In general it might be argued that:</p> <ul style="list-style-type: none"> • Top-down approaches tend to have a greater environmental impact, whereas bottom up approaches are more likely to take into account local resources and the need to sustain these. • Bottom -up approaches may have greater equity or may focus more on a particular group in need; top-down approaches may have a broader social impact reliant on trickle down. • Scale is likely to be different; some top-down approaches may be national or regional in terms of aims and impacts • Bottom-up projects may be more about meeting basic needs than about generating income or creating wealth; as such they may be capable of only going so far down the development pathway. <p>Note that a huge range of examples and case studies might be used. L4 is possible with a full assessment of one example of top-down and bottom-up.</p>

Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. One or two descriptive points about strategies which may or may not be applied to the question. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Structure is satisfactory. Does attempt to contrast strategies but advantages and disadvantages are likely to be general and unbalanced. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	9-12	Structure is good. Contrasting strategies with some detail which are appropriate; the advantages and disadvantages clearly stated. Begins to assess. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	Carefully structured, genuine assessment recognising complexities. Detail on named strategies with advantages and disadvantages and a balanced view. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number	Question
5a	(a) Explain how both taxing and subsidising petrol can have impacts on human and ecosystem wellbeing.(10)

Indicative content

In general developed countries tax, and the developing world subsidises (or taxes less); oil exporters also tend to subsidize. Expect some description of Figure 5 linked to explanations.

<p>Taxing ~ ecosystems:</p> <ul style="list-style-type: none"> • The polluter pays could be argued; in 'green' countries (Norway) taxes are highest therefore accounting for the externalities of the technology. • Promotes reduced fuel use therefore better for environment • Taxes may not be spent on improving things (comment on figure) 	<p>Taxing ~ humans:</p> <ul style="list-style-type: none"> • Unhappy, highly taxed people e.g. 'I'm sick of being the polluter who pays' from figure. • Could reduce pollution and therefore promote health; taxes may be spent on public transport or directed into other areas e.g. healthcare.
<p>Subsidising ~ ecosystems:</p> <ul style="list-style-type: none"> • Promotes excessive use and damage to the environment e.g. air pollution. • urban sprawl / road building encouraged due to low fuel prices. 	<p>Subsidising ~ humans:</p> <ul style="list-style-type: none"> • Promotes excessive use e.g. two cars from the figure. • Likely to increase pollution • Impacts of low air quality and congestion on human health • Large % of government spending goes on fuel means less for health, Education, etc

There are other possible impacts on humans and ecosystems.

Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. Some ideas but descriptive /lift-offs; narrow focus and lack of clear reasoning. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Structure is satisfactory. Some range of ideas and mentions humans and / or ecosystems with some details, but may lack balance. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Structure is good and there are detailed human and ecosystem impacts with some balance and detail. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare

Question Number	Question
5b	(b) Using named examples, discuss the extent to which there is a widening technology gap between the developed and developing world (15)
	Indicative content
	<p>Some candidates will tend to state how the gap is ever-widening, better candidates might spot a more complex pattern. Possible areas of focus are:</p> <ul style="list-style-type: none"> • The digital divide and the growing gap between PC and internet access in the developed world versus the developing world. • The difficulty of overcoming this due to the need for pre-existing technologies such as electricity and telephone lines. • The concept of leapfrogging such as mobile phones in India, which tends to suggest that in some areas the gap is being narrowed. Examples like the Tata Nano might suggest leapfrogging in other areas too. • The rapid spread of farm technologies such as GM crops might support this, although in both cases it could be argued that these developments are not for the majority. • In some cases action is taken to try and narrow the gap such as with HIV / AIDS anti retroviral drugs where the WHO has attempted to make the technology available even in the poorest countries. • Some discussion of the geography of the gap might occur, with the focus of it very much on sub-Saharan Africa.

Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. Tends to take one view e.g. its widening but offers little support. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Structure is satisfactory. Some discussion and some examples but lacks range; likely to be one-sided. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	9-12	Structure is good. Range of examples and some details may begin to see that the gap is complex and offer some support for this. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	Carefully structured. Detailed, supported discussion which recognises that the gap is most likely widening and narrowing at the same time. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

SECTION B

Question Number	Question
-----------------	----------

6a	(a) Explain why the Pacific SIDS (Small Island Developing States) have such high biodiversity. (10)
----	---

	Indicative content
--	--------------------

- Essentially a question about processes and factors that influence biodiversity.
 - Expect some definition of biodiversity (genetic, species, ecosystem) from good candidates
 - Most islands were only settled relatively recently in human history and levels of development are relatively low on *some* islands, therefore biodiversity has been preserved until recently. Isolation has protected the islands, some are uninhabited.
 - Many have a tropical climate, ideal for growth and rapid breeding and promoting rapid evolution; lack of limiting factors as on many islands rainfall is high, temperatures high all year (lack of seasonality) and there is ample sunshine; rapid nutrient cycling in the hot wet climate. Low islands have less rainfall.
 - Endemism is high on some islands, with large numbers of unique species due to evolution in isolation.
 - There are a wide range of environments and niches in low and high islands (zonation by altitude), shallow and deep seas. On many islands there is a wide range of marine environments including coral reefs, lagoons and mangroves.
- Responses which focus narrowly on one factor will tend to be self-penalising.

Synoptic linkages

Biodiversity under threat Unit 3.1

Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. General ideas on climate and uniqueness, or a focus on lack of human activity; narrow. Descriptive use of resources. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Structure is satisfactory. Likely to mention a range of physical and human factors; some details on biodiversity; may lack full range. Some reference to wider links. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Structure is good. Detailed understanding of biodiversity and the range of factors promoting it; may compare to other areas. Synoptic. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number	Question
6b	(b) Evaluate the relative importance of the threats facing biodiversity in the region (16)

Indicative content

There are a wide range of threats, which good candidates should cover and also attempt to put into some type or relative order / ranking e.g. by how frequently they occur, costs over the long or short term, threats today versus those in the future, or by scale e.g. local -v- whole region; mainly a threat to the natural environment or mainly to people, or both.

Figure 3 provides a structure which some candidates may spot they can use:

People and livelihoods:

- Population growth on some islands is leading to unsustainable use of resources, such as deforestation and clearance of land for farming; erosion as a result of this is damaging reefs.
- Over-fishing by local people could be contributing
- Moves into mass tourism are a threat to reefs and the coastline, this is an intense pressure on some of the 'best' reefs.
- Limited economic diversity has driven people into over reliance on ultimately damaging activities such as sugar cane production.
- Pollution and siltation as a result of poor farming practice.

Institutions and Governance:

- Management seems to have been patchy, with paper parks an issue. Some problems such as invasive species seem to have got out of control all too easily.
- Lack of government stability has contributed to poor management.

External threats:

- Globalisation and the transport revolution could be seen as beyond the control of local people.
- Hazards such as tsunami and cyclone storm surges can lead to salt-water pollution of land, and destroy coral reefs; El Nino leads to increased sea levels, and other hazards such as drought and coral bleaching.
- Global warming could intensify some of the hazards (above) and lead to loss of some ecosystems e.g. cloud forest; could get worse in the future and is very hard to control or reverse.

Synoptic linkages

Unit 3 biodiversity 3.2

Unit 1 Climate change / hazards and Globalisation

Unit 4 tourism

Unit 2 Coasts and Extreme Weather

Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. A few generalised threats only. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Structure is satisfactory. Some range of threats discussed with some details from the resources but there is no attempt to evaluate. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	9-12	Structure is good. A range of threats with variable detail and begins to attempt to evaluate these. Some reference to wider links. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-16	Carefully structured. Detailed account with a wide range of threats with a genuine evaluation of relative importance. Strong synoptic links. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number	Question
6c	(c) Examine the actions shown in Figure 7. Assess the contribution these might make to a more sustainable future for the Pacific SIDS. (14)
	Indicative content
	<p>There should be some discussion of sustainability in the context of the islands, and the need to balance economic wellbeing with ecosystem wellbeing - both would be required for a sustainable future it could be argued. Good candidates might recognise that a long-term solution would need to address climate change which the islands cannot do alone.</p>
	<p>Expect coverage of the alternatives in Figure 7, but not all of them in equal depth even for L4.</p>
	<ul style="list-style-type: none"> • CBD / BAP - good way of determining what needs to be done, and what should be protected, but likely to be costly to carry out and implementation may be difficult and expensive, especially if lots of players are involved. • IF - nice idea, as it can press for the global change the islands would need to prevent serious climate change impacts. Too little, too late? Will anyone actually listen? • MPA -Good idea on paper, but the problem is one of funding and monitoring; Kiribati seems to have managed it but huge up-scaling would be needed plus cooperation with all users. • Restoration - ideal type of direct action but hugely time consuming and could all the hard work be ruined by one major storm or climate change? • Sustainable development - could remove the local threats and help people see biological resources are their long term future rather than as short term income.
	Synoptic linkages
	<p>Some candidates may refer to other examples of Marine Protected Areas and other types of biodiversity management - popular examples are likely to include St Lucia's SMMA, the Great Barrier Reef, Galapagos islands, Komodo National Park, Korup/Kilim/Udzwunga. UK national parks and other protected areas - there are numerous possibilities.</p>
	Unit 3 Biodiversity 3.2
	Unit 3 Development

Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. A few ideas and a very narrow focus; lacks link to sustainability. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Structure is satisfactory. Some details and range from the resources, limited links to sustainability but may be about the future. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	9-12	Structure is good. Links to sustainability and a good range of ideas and comment; begins to assess the contribution to sustainability. Some reference to wider links. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-14	Carefully structured. Good detail from the resources and a genuine assessment of the way forward with and the strength of links to sustainability. Strong synoptic links. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Further copies of this publication are available from
Edexcel Publications, Adamsway, Mansfield, Notts, NG18 4FN

Telephone 01623 467467
Fax 01623 450481

Email publications@linneydirect.com

Order Code UA023953 Summer 2010

For more information on Edexcel qualifications, please visit www.edexcel.com/quals

Edexcel Limited. Registered in England and Wales no.4496750
Registered Office: One90 High Holborn, London, WC1V 7BH