

A-level ENVIRONMENTAL SCIENCE 7447/2

Paper 2

Mark scheme

June 2023

Version: Final v1.0



Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

Qu	Part	Marking g	uidance	Comments	Total marks	AO
01			1		_	AO1
		Term		Definition		1a
	SpeciesA group of organisms that resemble each other more than other organisms and interbreed to produce fertile offspring.		1			
		Biome	(Large geogr climatic featu community/v	(Large geographical) region with particular climatic features and a unique community/vegetation.		
		Community	The population particular are	ons of all the species living in a ea.	1	
	Population All the individuals of a species living in a particular area.		1			
		Ecological niche	The role an our of resour other species	organism plays in its habitat (its rces and its inter-relationships with इ).	1	
				Total =	5	

Qu	Part	Marking guidance	Comments	Total marks	AO
02	1	 photosynthesis produced oxyge (O₂) formed ozone/O₃ (O₃) <u>absorbs</u> UV radiation 	en/O ₂	1 1 1	AO1 1b

Qu	Part	Marking guidance	Comments	Total marks	AO
02	2	Two functions of CO ₂ Two linked explanations how C	CO₂ aids survival	2 2	AO1 1a = 2 AO1 1b = 2
		 Functions used in photosynthesis greenhouse gas/absorbs IR rad Linked explanations produces carbohydrates/sugars chains produces oxygen for (aerobic) maintains optimum/warmer terr 	diation s/proteins/lipids for growth/food respiration nperatures		

Qu	Part	Marking guidance	Comments	Total marks	AO
02	3	 2013–2020 increased growth ((increased growth) indicates his [A: converse 1964–2012] [R carbon dioxide] 	wider rings) gher temperatures/more rainfall	1	AO3 1b = 1 AO2 = 1

Qu	Part	Marking guidance	Comments	Total marks	AO
02	4	 One from: named example of other variable disease, nutrients multiple climate factors affect g no trees/limited age in some ar only shows local climate trees evolved relatively recently trees decompose (so limited data) 	le affecting growth rate eg rowth eas / ata records)	1	AO1 1b
			Total =	10	

Qu	Part	Marking guidance	Comments	Total marks	AO
03	1	number of different species in an	 number of different species in an area 		
		[R density]			

Qu	Part	Marking guidance	Comments	Total marks	AO
03	2	 measures sound <u>frequency</u> is unique to species 		1 1	AO1 1b

Qu	Part	Marking guidance	Comments	Total marks	AO
03	3	Three from:		3	AO3 1a
		 females fly over greater distance females fly slower females fly higher/over a greater females fly over/through to wind t around them females north-south whereas male 	/longer flight path height range urbines whereas the male fly les east-west/different direction		

Qu	Part	Marking guidance	Comments	Total marks	AO
03	4	Three from:		3	AO2
		 designation of protected areas/na reduce/prevent named threats ald manage food/water sources at fee put up bat boxes/protect trees/but path create/maintain biological corrido threats timings of flights can inform street identify potential release sites 	amed designation e.g. SSSI ong flight paths e.g wind turbines eding sites/on flight path ildings at roosting sites/on flight rs to connect feeding habitats/avoid t lighting regimes		

Qu	Part	Marking guidance	Comments	Total marks	AO
03	5	 One from: disturbs/may cause harm tag may influence behaviour/surv short battery life fall off some species not suitable to attact [A expensive] 	ival ch transmitter	1	AO2
			Total =	10	

Qu	Part	Marking guidance	Comments	Total marks	AO
04	1	Transect:an environmental gradient is pres distance	ent/ (predicted) change over	1	AO2
		Random sampling:reduces bias		1	

Qu	Part	Marking guidance	Comments	Total marks	AO
04	2	 One from: 0.5m × 0.5m/0.25m² 1m × 1m/1m² 2m x 2m/4m² [R answers without units] 		1	AO3 1b

Qu	Part	Marking guidance	Comments	Total marks	AO
04	3	One mark for the feature	ne mark for the feature		AO3 1b
		One mark for related explanation		1	
		gridsmaller areas allow totalling of each square			
		or			
		 (quadrat with) points vegetation touched (by point) is read 	ecorded/totalled		

Qu	Part	Marking guidance	Comments	Total marks	AO
04	4	 One mark for correct distribution of to rate of retreat One mark for correct explanation Early sere/named early sere taxa covering a larger area/distance w time for colonisation/succession [A converse] 	named vegetation type and related e.g. lichens, mosses, grasses ould suggest a fast rate of retreat	1 1	AO2

Qu	Part	Marking guidance	Comments	Total marks	AO
04	5	Three explanations of how species change conditions:			AO1 1b
		 e.g. weather minerals from rocks to proceed on the state of the protect from UV/restate of the state of	rovide soil nutrients modifies temperatures tes/shelter from predators rganic matter increases nutrients icreases moisture retention icreased soil depth erosion actor e.g. intercept wind reducing		
			Total =	10	

Qu	Part	Marking guidance	Comments	Total marks	AO
05	1	For level 3 both similarities and discussed/ ecosystems compa	l differences must be red.	9	AO1 1a = 2 AO1 1b = 2
		Similar threats to both coral reef	ecosystems		AO2 = 3
		 destructive fishing methods: da feeding/breeding grounds demersal trawling scrapes awa demersal longlining snags cora shellfish traps damage on impa ghost fishing from discarded fis overfishing removes species al population decline ocean temperature increase: be tolerance/breakdown in intersp reduced oxygen ocean acidification: reduction in saturation reduces growth rate 	mage the seabed destroying y seabed as act shing gear kills species pove the MSY resulting in eyond range of ecies relationships/causing n pH and calcium carbonate		AO3 1c = 2
		 Deep-water coral reefs only hydrocarbon exploration/production oil platforms pipelines causes impacts from potential threat from oil spilled extraction telecommunication/electricity care burial in the seabed disturbs seconal potential treat from future mine in AUVs/ROVs eg metals from changes in ocean currents that Tropical coral reefs only tourism: damage from boat and souvenir collection pollution from surface run off: seutrophication increase turbidity/sedimentation development/ agriculture/ destr introduced species coral bleaching 	ction causes physical impact mud discharges from rock drilling from mechanical fault at site of ables ediment into water smothering ral exploration with the increase deep sea nodules deliver nutrients chors/ touching/ disturbance/ sewage/fertiliser causing in from soil erosion due to ruction of mangroves		

Examiners are reminded that AO1, AO2 and AO3 are regarded as interdependent. When deciding on a mark all should be considered together using the best fit approach. In doing so, examiners should bear in mind the relative weightings of the assessment objectives. More weight should therefore be given to AO1 than AO2 and AO3.

Level	Marks	Descriptor
3	7–9	A comprehensive response to the question, with the focus sustained. A conclusion is presented in a logical and coherent way, fully supported by relevant judgements. A wide range of knowledge and understanding of natural processes/systems is applied. The answer clearly identifies relationships between environmental issues. Relevant environmental terminology is used consistently and accurately throughout, with no more than minor omissions and errors.
2	4–6	A response to the question which is focussed in parts but lacking appropriate depth. A conclusion may be present, supported by some judgements, but it is likely not all will be relevant. A range of knowledge and understanding of natural processes/systems is shown. There is an attempt to apply this to the question, but there may be a few inconsistencies, errors and/or omissions. The answer attempts to identify relationships between environmental issues, with some success. Environmental terminology is used, but not always consistently.
1	1–3	 A response to the question which is unbalanced and lacking focus. It is likely to consist of fragmented points that are unrelated. A conclusion may be stated, but it is not supported by any judgments and is likely to be irrelevant. A limited range of knowledge and understanding of natural processes/systems is shown. There is an attempt to apply this to the question, but there are fundamental errors and/or omissions. The answer may attempt to identify relationship between environmental issues, but is rarely successful. Limited environmental terminology is used, and a lack of understanding is evident.
	0	Nothing written worthy of credit.

Qu	Part	Marking guidance	Comments	Total marks	AO
05	2	 One from: Marine Protected Area (MPA) Marine Conservation Zone (MCZ) Marine Nature Reserve (MNR) Special Area of Conservation (SA No Take Zones (NTZ)) (C)	1	AO1 1a

Qu	Part	Marking guidance	Comments	Total marks	AO
05	3	Two marks for difference in conditionsno light for photosynthesis		2	AO2
		 Ino light for photosynthesis Iower temperatures 			
		Two marks for reason conditions reduce rate of recovery		2	
		 lower energy input reduced growth rate/ rate of biochemical reactions 			
		[A converse]			

Qu	Part	Marking guidance	Comments	Total marks	AO
05	4	more interspecies relationships/ stable food web		1	AO2
			Total =	15	

Qu	Part	Marking guidance	Comments	Total marks	AO
06	1	 80 and 60 80 / 60 = 1.33 or 1.3 or 1.33 : 1 ecf [R 1: 1.33] Award 2 marks for correct answer 	Allow ecf if wrong data is divided correctly e.g. if data for pigs used 50 and 30 = no marks 50/30 = 1.67 1 mark ecf	1 1	AO3 1a AO2

Qu	Part	Marking guidance	Comments	Total marks	AO
06	2	• B (Dairy Cattle)		1	AO3 1b

Qu	Part	Marking guidance	Comments	Total marks	AO
06	3	 energy used for artificial lighting energy used for heating energy used for machinery material used for barn production/growth of chicken feed 	1	2	AO2
			Total =	5	

Qu	Part	Marking guidance	Comments	Total marks	AO
07	1	 transfer of DNA/genetic material from one species to another 		1	AO1 1a

Qu	Part	Marking guidance	Comments	Total marks	AO
07	2	Four from:		4	AO3 1a
		 same <u>species</u> of caterpillar used if caterpillars fed on the same diet if caterpillars should be same age caterpillars were protected from p same number of caterpillars place same number weed plants used same <u>species</u> of weeds used in b toxic to caterpillars same positioning of weeds used in b prevailing wind/distance from crop same pest control methods / pest investigation carried out when the corn/corn at same stage of growth fields should be far enough apart pollen to non-GM corn weeds same (area for same) climatic/weight 	in both fields before the field trial oredators in both fields ed on each weed plant in each field/ oth fields/use weed species not eg on all sides of field edge/side of p icides used in both field e pollen was being released from h to prevent contamination of Bt s ather conditions		

Qu	Part	Marking guidance	Comments	Total marks	AO
07	3	Three from:		3	AO3 1a
		 mean mass/growth rate higher in mean mass significantly different difference between the mean ma variation in mass/standard devia (onward) 9/11 variation in mass in Field A increase 	n Field B t on day 5/9/11 ass increases over time. ation in Field A is higher on day 5 eases with time		

Qu	Part	Marking guidance	Comments	Total marks	AO
07	4	 Up to two marks for reason One mark for explanation wind may blow pollen to one side caterpillars on one side will eat / e than the other side a natural genetic variability of cate different sensitivity to toxin / differ greater variability of weeds some more nutritious / toxic variation in competition some caterpillars have access to 	of the field more exposed to more toxic Bt pollen erpillar rent growth rate	1	AO3 1c

Qu	Part	Marking guidance	Comments	Total marks	AO
07	5	 no (significant) difference in the p of caterpillars in Bt and non-GM c 	ercentage (%) survival corn / Field A and B	1	AO2
		[R no correlation, mean mass]			

Qu	Part	Marking guidance	Comments	Total marks	AO
07	6	• 13		1	AO2

Qu	Part	Marking guidance	Comments	Total marks	AO
07	7	 use of smaller U value/23 greater than > critical value, so null 	no significant difference /accept the	1 1	AO3 1c
		[A ecf converse of answer if answer	to 07.6 is > 23]		

Qu	Part	Marking guidance	Comments	Total marks	AO
07	8	• 0.05 or 5% probability that chance	e caused the difference	1	AO1a
		[A 95% confidence/significance]			

Total =	15	

Qu	Part	Marking guidance	Comments	Total marks	AO
08	1	• 73.3 (%)	16100 + 1900 = 18 000 67 300 - 18 000 = 49 300 (49 300 / 67 300) × 100 = 73.25	1	AO2

Qu	Part	Marking guidance	Comments	Total marks	AO
08	2	 Two changes to farming as a resule.g. beetle banks buffer strips organic farming/reduced pesticided hedgerow maintenance/planting/r skylark plots field margins/pollinating flower mails drainage wetland set aside/rewilding renewable energy use of machinery use of pesticides Two impacts on the environmentate e.g. increase/decrease in death of nore decrease/increase of food source increase/decrease biodiversity decrease/increase fossil fuel use/ 	ult of subsidy es emoval argins al linked to change h-target species ching/eutrophication s CO ₂ emissions ent subsidy	2	AO2
			Total =	5	

Qu	Part	Marking guidance	Comments	Total marks	AO
09	1	 1467 / 399 = 3.67669 3.68 ecf Two marks for correct answer with no working 	ecf for inverse division 0.272 ecf for wrong selected data from table, to correct number of significant figures	2	AO3 1a

Qu	Part	Marking guidance	Comments	Total marks	AO
09	2	 Two marks for reasons. Two marks for linked explanation Area: largest total area habitat destruction / named negincrease competition of food Productivity: highest productivity / high numberst inputs of named energy antibiotics/ food/machinery highest output of waste productivity 	ls. gative ecological impact e.g. ber of shrimps y subsidies e.g. pesticides/ t	4	AO3 1b = 2 AO2 = 2

Qu	Part	Marking guidance	Comments	Total marks	AO
09	3	 Two marks for how changes in water quality occur: food/faeces/high DOM high rates of decomposition (of DOM) pesticide/antibiotic residue/ hormones 		2	AO2
		 high amounts bacteria/parasite Two marks for change in water q increased turbidity deoxygenation high concentration of ammoniu toxicity/antibiotic resistant bacteria increased pathogens 	s uality: m/nitrates eria	2	
			Total =	10	

Qu	Part	Marking guidance	Comments	Total marks	AO
10	1	One mark for correct region:South America	Africa: 75 – 35 = 40 0.4 × 20 000 = 8 000	1	AO3 1a
		One mark for correct rate of deforestation for South America:12 000 ecf	South America: 95 – 65 = 30 0.3 × 40 000 = 12 000	1	
	 One mark for answer in standard form: 1.2 × 10⁴ ecf 	(Sub)tropical Asia: 70 – 30 = 40 0.4 × 15 000 = 6 000	1		
		(A 1.2000 × 10 ⁴)	ecf for correct rate of deforestation of incorrect region		
		Max two mark for one ecf Max one mark for two ecf	ecf for correct standard form of incorrect region		

Qu	Part	Marking guidance	Comments	Total marks	AO
10	2	 Three marks for loss of forest ecosystem service: reduced carbon sequestration / oxygen production reduced interception 		3	AO2
		 reduced evapotranspiration reduced root binding of soil loss of wildlife habitat loss of amenity use loss of named resource e.g. medi loss of genetic resource 	educed evapotranspiration educed root binding of soil oss of wildlife habitat oss of amenity use oss of named resource e.g. medicines / food oss of genetic resource		
		 Three marks for linked impact on hu named impact of climate change in named impact of flooding eg loss named impact of reduced rainfall/ named impact of soil erosion eg la agricultural, reduced quality of wa less control of disease / malnutritie loss of potential characteristics in programmes) reduced income from tourism (reduced income from tourism) 	umans: / ozone formation of crops, homes drought e.g. crop failure oss of land that supports ter for named use on agricultural species (from breeding	3	
		 named impact of amenity loss 	source exploitation		

Qu	Part	Marking guidance	Comments		Total marks	AO
10	3	 One from: International Tropical Timber Organisation / ITTO Forest Stewardship Council / FSC Forestry Commission/ Forestry England 		1	AO1 1a	
			Tota	=	10	

Qu	Part		Marking guidance		Comments		Total marks	AO
11	1	Indic Stude disac	a tive mark scheme: ents should name meth Ivantages	ods a	and discuss both advantages	and	25	AO1 = 10 AO2 = 10 AO3 = 5
Topic area / spec ref		ea ef	Method		Advantages	Disadvantages		ntages
 3.5.1. Agroe 3.5.1. Enviro impace agricu 3.5.1. Strate increation sustation agricu 	Nutrient application methods egReduced energy used/GHG produced from manufacture of artificial fertilisersSmell of manure Potential pathog5.1.3 invironmental mpacts of agricultureOrganic manures Green manuresReduced energy used/GHG produced from manufacture of artificial fertilisersSmell of manures Potential pathog6.5.1.5 ingricultureOrgo rotation LegumesReduced eutrophication risk DOM provides food for soil biota/increases aeration/drainage/water retention reducing the need for as much irrigation/reduces risk of erosionSmell of manures Potential pathog6.5.1.5 Buffer strips agricultureConservation of soil biotaMakes use of waste product crop rotation also providesManure heavy t Buffer strips arging			re gen risk g organic ohication to transport s take up harket for ke crop land				
 3.2.5.1 How human activities affect soil fertility 3.2.5.2 Causes of soil degradation and erosion 3.2.5.3 Soil management strategies to increase sustainability 		ect bil and ment	Alternative to pesticide use eg Maintenance of natural predator habitats Introduction of natural predators Sterile male technique Crop rotation Barrier/sacrificial crops Buffer strips	Red spe Mai hab inci Cro fert dive soil inte soil soil irrig Gov	duced death of non-target ecies/human poisonings intenance of pest predator bitats/buffer strips also rease general biodiversity op rotation can reduce iliser input/encourages ersification ching also provides erception reducing risk of erosion/evaporation from and need for as much gation vernment subsidies	Less loss Red Mak mac No r	effective a of yield fro uces land f es use of la hinery mor narket	as pesticides/ m pests for crops arge e difficult
3.5.1. Manip food s	2 oulation species	of	Mulching/ weeding					

Soil management methods eg Direct drill/zero tillage Cover/long-term crops Multi-cropping/strip cropping Contour/across slope ploughing increase DOM Tied ridging/terracing Windbreaks Mulching Drainage	Reduced soil erosion by interception/root binding/less disturbance/wind velocity Reduced impact on aquatic habitats Reduced release of CO ₂ /N ₂ O/ CH ₄	Labour intensive/no machinery access DOM bulky to transport/energy use
Genetic manipulation to reduce the need for additional inputs Selective breeding Asexual reproduction/ Vegetative propagation/ cloning Transgenics/GM	Higher yields Increases productivity reducing need for more land Pest resistance reduces need for pesticides Drought tolerance can reduce irrigation/over-abstraction impacts Nitrogen fixation can reduce fertiliser application/run off/NOx Named examples eg Direct seeded rice can reduce methane emissions	Reduction of gene pool Potential impacts of GM/genetic contamination/ toxic pollen Public opposition Cost
Reduced use water use Drip irrigation Selective breeding GM Hydroponics	Reduced abstraction impacts Reduced run off impacts	Cost of new materials GM impacts
	Total =	25

Qu	Part		Marking guidance	Comments	Comments		AO
11	2	In St di	dicative mark scheme: tudents should name methods sadvantages	and discuss both advantages	and	25	AO1 = 10 AO2 = 10 AO3 = 5
Top / s	oic area pec ref	a	Method	Advantages	Disadvantages		ntages
3.5.2.2 Fishing			Catch quota	Reduces the risk of over- fishing	Difficult to accurately monitor populations/estimate MSYs/to police maybe unfair for smaller vessels		irately timate maybe er vessels
		Minimum catch size A r		Allows fish to reach maturity, Increases chance of breeding and re-		Some species reach breeding age before maximum size	
				population	Ove dead retur	r-sized fish d by the tim med to the	may be ne they get sea
			Net/hook design: Mesh design/size/escape panels	Allows immature fish/non- target species to escape Named eg TEDs turtles	Expensive		
			devices/dolphin pingers Hook shape/sinkers	Reduces risk of bycatch Named eg sinkers Albatross			
			Restricted fishing methods Ban on drift nets/ demersal trawling	Avoids bycatch Prevents seabed damage/ habitat destruction	Pressure on other areas		her areas
			Restricted fishing effort Size of boat/engine/time at sea	Reduces risk of over-fishing	May subs boat	cost in go sidies to de s	vernment commission
			No-take zones protected breeding areas closed seasons	Allows breeding and repopulation Conserves other marine biodiversity too	Diffic enfo of va	culty of sur rcement an ast offshore	veillance, nd monitoring e area
			Protected individuals	Ensures breeding and repopulation Named eg lobsters	Pressure on other areas		her areas
			Captive rearing and release to boost wild populations	Increases chance of survival/population/potential catch	Ener cent intro	rgy use at re Potentia duction	breeding Il of disease

3.5.2.2 Fishing	Biodegradable/radio tracked equipment to reduce ghost fishing	Lost nets can be found/broken down reduce ghost fishing accountability	Biodegradable nets may not last very long/be too expensive
3.5.2.3 Aquaculture	Aquaculture	Reduced fishing impacts	Habitat loss Organic waste pollution
		Total =	25

Level	Marks	Descriptor
5	21–25	A comprehensive response with a clear and sustained focus. Content is accurate and detailed. Relationships are identified, reflecting the holistic nature of environmental science and the answer as a whole is coherent. A wide range of relevant natural processes/systems and environmental issues are described and articulated clearly. These are applied systematically to the question, with clear relevance to the context. Where conclusions are made, these are fully supported by judgements and presented in a logical and coherent way. Relevant environmental terminology is used consistently and accurately throughout. If there are errors, these are very minor indeed and not sufficient to detract from the answer.
4	16–20	A response in which the focus is largely sustained, with content that is mainly accurate and detailed. Relationships are identified and the answer is largely coherent. A range of natural processes/systems and environmental issues are described and articulated clearly. In most cases, these are applied appropriately to the question but, in some, it is less clear why they are relevant. Where conclusions are made, these are supported by judgements which are mostly coherent and relevant. Relevant environmental terminology is used consistently and throughout, with no more than minor errors.
3	11–15	A partial response which is focused in parts. The content is mostly accurate but not always detailed. There is an attempt at identifying relationships, but the answer as a whole is not fully coherent. A range of natural processes/systems and environmental issues are described, most are articulated clearly. In some cases, these are applied appropriately to the context but, in most, it is less clear why they are relevant. Where conclusions are made, it is not always clear how they relate to the judgments given and are likely to contain errors. Relevant environmental terminology is used, but not consistently and there may be errors.
2	6–10	An unbalanced response, lacking in focus. The content may be inaccurate and lacking detail. There is some attempt at identifying relationships, but the answer is not coherent. A limited range of natural processes/systems and environmental issues are described but not articulated clearly and likely to contain errors and/or omissions. There is a limited attempt to apply them to the context. Any conclusions are likely to be asserted, with no supporting judgements and fundamental errors. Environmental terminology is used, but not always appropriately and sometimes
1	1–5	Fragmented points, whose relevance to the question and relationships to each other are unclear. A few natural processes/systems and environmental issues are listed, but unlikely to be described and many may be irrelevant. There is no clear attempt to apply them to the context. It is unlikely that a conclusion will be present. There is an attempt to use environmental terminology, but seldom appropriately.
	0	Nothing written worthy of credit.