

Outdoor and Environmental Studies GA 3: Written examination

GENERAL COMMENTS

Many students gave detailed answers to extended questions; however, some students still need to take more time to read the questions carefully and interpret them in terms of the study design.

Students must read each question carefully to ascertain the degree of information that is expected. Words such as **explain, describe, analyse** or **evaluate** indicate that some depth is required in the answer. Words such as **identify** or **outline** indicate a shorter answer will suffice. The format of the question and answer book also gives students an indication of the length of answer required.

Students should use examples carefully and avoid the temptation to refer to only one example throughout. Students should prepare a range of different examples so that they can quote ones **most appropriate** to the question. Where a number of examples are required students are advised to give only that number as any additional examples will not attract any marks.

Specific areas of the study where students appear to need more detailed preparation are:

- the importance of biodiversity and the implications for human society of a loss of biodiversity
- influences on participation in outdoor activities; generally social or cultural and may include: increased leisure time, guidebooks, improved technology and equipment
- understanding the difference between ‘*strategies*’ used by individuals or groups to affect decisions on land use such as protesting, lobbying, petitions and ‘*management strategies*’ undertaken by land management authorities such as zoning, restricting numbers, permit systems, seasonal closures (students need to be able to distinguish between these using the context of the question).

Students are advised to write in pen and as legibly as possible.

SPECIFIC INFORMATION

Question	Marks	%	Response
Question 1	a		Identification of four feasible and clearly different impacts (1 mark each)
	0/4 1/4 2/4 3/4 4/4 (Average mark 2.8)	1 6 29 40 24	<p>Mountain bike:</p> <ul style="list-style-type: none"> • traffic could disturb wildlife, e.g. disturb nesting • heavy duty tyres destroys vegetation • constant use of an area would create tracks and cause compaction problems • tracks caused by bikes are washed out in heavy rain and cause erosion. <p>Four-wheel drive vehicle:</p> <ul style="list-style-type: none"> • the noise of the vehicle would disturb wildlife • tracks caused by vehicles are washed out in heavy rain and cause erosion • constant use of an area would create roads and cause compaction problems • widening old tracks and forming new ones damages vegetation • presence of vehicles in the environment would disturb wildlife by altering their habitat • possibility that vehicles would spill oil into creeks and impact on the water ways. <p>Exhaust fumes from vehicles was not regarded as a sufficient impact.</p>
	b		One mark for identifying a feasible conflict and 2 marks for a thorough description of the conflict
	0/3 1/3 2/3 3/3 (Average mark 1.6)	16 27 37 20	<p>Conflicts could include:</p> <ul style="list-style-type: none"> • impact of 4WDs on the tracks would make them unsuitable for the mountain bike riders as they become too rough except for the most rugged riders • safety of mountain bike riders would be compromised by the presence of much faster moving 4WDs • the noise created by 4WDs would impact on the peace of the mountain bike riders outdoor experience • the presence of numbers of bike riders would cause an obstacle to as

		they move more slowly, especially uphill.
c		One mark each for two contemporary images, each with some description
0/2	35	
1/2	39	
2/2	26	
(Average mark 0.9)		Image could include the: <ul style="list-style-type: none"> • outdoors as a place for recreation • outdoors as a place to challenge ourselves, as a gymnasium • outdoors as a place to be conquered, as an adversary • outdoors as a place where we need to use modern technology to ensure our comfort and safety • outdoors as a place of freedom • outdoor environment as being accessible to all • outdoor environment as a lush green environment • outdoor environment as a venue accessible to young people. <p><i>Note:</i> The image of the outdoor environment as a cathedral is not relevant to the photos in this question. It was also important for answers to focus on the environment not on the participants depicted.</p>
d		One mark each for describing two appropriate management strategies for minimising environmental impact and 1 mark each for describing how each of these should be successful in achieving its goal
0/4	8	
1/4	16	
2/4	34	
3/4	26	
4/4	17	
(Average mark 2.27)		The strategies used could be appropriate for either mountain bikes only, 4WDs only or both types of vehicles. Appropriate management strategies include: <ul style="list-style-type: none"> • closing tracks during winter (to 4WDs or both vehicles) so that the damage caused when the tracks are particularly soft due to rain is avoided; this reduces track damage and also erosion of soil off the tracks and into watercourses • limit the number of vehicles allowed in an area at any one time – this requires a booking system but ensures that large numbers of vehicles do not all impact on an area at one time; this reduces immediate impact and gives an area a chance to recuperate as impact is spread out and sustainable • zoning areas for separate and specific uses as this could allow each vehicle to use areas where their impact is sustainable and could close areas to both or one of the vehicle types if their use in such areas could not be maintained • develop codes of practices for sustainable use of the outdoor environment by both vehicles and conduct an education campaign to bring the codes to the attention of users; this would encourage sustainable uses for the vehicles as users are made aware of the potential to cause damage and ways of avoiding it • advertise the imposition of penalties as a deterrent to not following guidelines to reduce impact; for some users the likelihood of financial penalty may be what is required to ensure their practices are sustainable
e		One mark for identifying a plausible management policy, 2 marks for an outline of the main features of the policy and 2 marks for an evaluation of the success of the policy
0/5	24	
1/5	11	
2/5	17	
3/5	25	
4/5	15	
5/5	7	
(Average mark 2.16)		For example: A management policy for Wilsons Prom requires overnight walkers to pre-book their walks and limits numbers allowed to camp at each campsite. This policy enables management to restrict the numbers walking in any group and consequently spreads the impact of walking groups, as those who miss out on popular areas are encouraged to visit other less popular spots. It also enables management to educate the walkers as to minimal impact techniques as these can be outlined when they book. This policy has been very successful as despite the large numbers visiting the area, impact is well controlled. As large groups are never on the tracks, track erosion is minimal, likewise campsites

		are well able to cope with the maximum numbers set. This ensures recreational use of the area will be maintained for future generations.
Question 2	a 0/3 20 1/3 15 2/3 31 3/3 34 (Average mark 1.78)	<p>One mark for identifying an Australian environmental group and 2 marks for a full discussion of the issue/s underlining one campaign</p> <p>The group could be an international group providing it has an Australian arm, e.g. Friends of the Earth. The discussion given had to focus on the issues involved not on specific actions taken by the group to achieve their goals. Choice of group was important in this question, as an issue which has been successfully resolved made it much easier to give a detailed answer to part (b).</p> <p>For example, students who chose the Wilderness Society often used the Franklin Dam conflict. The issue was the hydro-electricity development planned for this area by the Tasmanian Government and the Tasmanian Hydro-Electric Commission and how this plan involved the damming of the Franklin River. The Wilderness Society opposed this development because it would have involved the loss of very significant wilderness areas as well as damming the last free river in Tasmania.</p>
	b 0/3 28 1/3 24 2/3 29 3/3 19 (Average mark 1.4)	<p>One mark each for three feasible points made regarding each or one of the environments affected, public opinion, industry and/or government authorities</p> <p>Points made must have been a direct result of the campaign outlined in part (a) above.</p> <p>Using the example above students could make a variety of points such as:</p> <ul style="list-style-type: none"> • the area was not flooded and remains a wilderness area now with World Heritage listing • this was regarded as the biggest environmental issue yet faced in Australia and caused considerable division in the community • workers in Tasmania lost jobs when the hydro scheme was stopped and consequently were one of the loudest opponents of the Wilderness Society campaign • the campaign is recognised as having had a significant impact on the outcome of the 1982 Federal election as Bob Hawke pledged to stop the dam if the Labour Party was elected; the Labour Party was elected and consequently the dam was stopped. <p>It was important to analyse various effects as outlined in the question and not just list what the group did.</p>
Question 3	a 0/2 61 1/2 24 2/2 15 (Average mark 0.53)	<p>An international policy had to be named, 1 mark each for outlining two characteristics of the chosen policy</p> <p>Characteristics for various international policies could include:</p> <ul style="list-style-type: none"> • World Heritage listing: protects significant cultural and natural heritage sites, is under the auspices of UNESCO (or (UN), requires Federal government submission to UNESCO in Australia • RAMSAR: protects the breeding sites of migratory birds by cooperation between countries • CITES: protects against trade in endangered species by cooperation between countries • Agenda 21: report on task force on sustainable development from Rio Summit in 1992, led to Kyoto Protocol • Kyoto Protocol: an international treaty designed to limit global greenhouse gas emissions • International Whaling Convention: an international convention for the regulation of whaling which provides for the proper conservation of whale stocks.

<p>bi</p> <p>0/3 4 1/3 8 2/3 34 3/3 53 (Average mark 2.37)</p>	<p>1 mark for each minimal impact practice listed</p> <p>Practices could include:</p> <ul style="list-style-type: none"> • travel in small groups rather than large groups • spend one night only in each camping site • spread out when walking through untracked areas • avoid breaking plants and other vegetation when camping/walking • bury any human waste appropriately • wash dishes away from the river • do not use detergent when washing dishes • carry out all rubbish. <p>Using a stove, or camping in designated areas are excluded by the question; answers such as leave your pets at home, or don't pick the flowers were too trivial given that this area was clearly a national park.</p>
<p>bii</p> <p>0/6 5 1/6 5 2/6 14 3/6 19 4/6 24 5/6 17 6/6 16 (Average mark 3.66)</p>	<p>For the three practices already listed 2 marks each for clearly showing how this practice reduces impact</p> <p>Student responses in this question were often not specific enough. It was not sufficient to repeat the answer given above in part bi. This was a question where choice of examples was important. The stronger answers were given by students who chose three very different responses in bi. For example students who used 'leave things as you find them' as well as 'take out what you take in' had difficulty in making sufficiently different and detailed responses in this section. It also should be noted that littering cannot really be regarded as a minimal impact practice when it has been illegal in Australia for so long. Students are expected to outline more considered behaviours than this.</p>
<p>c</p> <p>0/3 29 1/3 41 2/3 24 3/3 5 (Average mark 1.05)</p>	<p>One mark for each of three of the following reasons:</p> <ul style="list-style-type: none"> • isolation of the continent after the super continent Gondwana broke up • the climate of the continent • geological stability of the continent • low level of nutrients in Australian soils • the fire regime in Australia.
<p>di</p> <p>0/1 57 1/1 43 (Average mark 0.43)</p>	<p>One mark for a reasonable attempt at a definition</p> <p>Biodiversity is the total of all the living organisms that make up the web of life on earth.</p>
<p>dii</p> <p>0/3 67 1/3 12 2/3 8 3/3 12 (Average mark 0.65)</p>	<p>One mark each for the following types of biodiversity:</p> <ul style="list-style-type: none"> • genetic diversity • species diversity • ecosystem diversity.
<p>e</p> <p>0/3 29 1/3 27 2/3 25 3/3 19 (Average mark 1.34)</p>	<p>One mark each for each of three potential impacts, explained in some detail</p> <p>Impacts could include:</p> <ul style="list-style-type: none"> • loss of species which are possible food sources • loss of ecosystem or habitat values and consequent loss of aesthetic value • reduced gene pool • reduced range of recreational activities • reduced stability of the environment (e.g. increased soil erosion, decreased water quality) • loss of species which are possible future medicine sources.

<p>f</p> <p>0/2 29 1/2 42 2/2 28 (Average mark 0.99)</p>	<p>One mark for each of two influences explained in some detail</p> <p>Influences could include:</p> <ul style="list-style-type: none"> • media • increased leisure time • increased/improved economic situation • better equipment and improved techniques • guide books and grading systems • packaging and marketing of activities • certification and qualifications • increased interest in wilderness experiences • awareness of conservation issues. <p>Family and friends, or word of mouth are not acceptable answers. Students who gave poor answers to this question tended to answer the question ‘why would you go there?’. A more complex response was required indicating a knowledge of various social influences and how these influences could increase visitor numbers in the Daintree area.</p>
<p>gi</p> <p>0/3 16 1/3 33 2/3 31 3/3 20 (Average mark 1.54)</p>	<p>One mark each for each feasible point made, either three impacts briefly explained or one major impact explained using at least three points</p> <p>Possible impacts include:</p> <ul style="list-style-type: none"> • soil erosion caused by road building • destruction of seedlings by trampling • reduced diversity and concentration of plants and animals • exposure of plant roots • vandalism to trees • faecal contamination of the water • litter and its impact, e.g. plastics impact on animals • oil run-off from vehicles and consequent impact on water sources • noise and its consequent impact on fauna.
<p>gii</p> <p>0/4 26 1/4 10 2/4 20 3/4 22 4/4 22 (Average mark 20.3)</p>	<p>One mark for each strategy listed and 1 mark for each explained fully</p> <p>Strategies could include:</p> <ul style="list-style-type: none"> • use of the media to obtain publicity for your cause • lobby the government minister or the state department responsible for the Blue Pool area to ensure their views are heard and considered • conduct a public meeting to inform other local people and politicians of the effect you believe development will have on the Blue Pool area • take direct action and blockade the development site to prevent further development and also bring publicity to the issue • protest or rally as a group in a public place to draw public and media attention to the cause • write letters to the editors of local or national papers to gain attention for the cause when they are published and read • collect signatures on a petition from people who support the cause and hence strengthen your case when the signatures are presented to the local government member • conduct an education campaign to show politicians or other local people the effect which you believe development will have on the Blue Pool area • monitor environmental effects which are occurring to use in the case against the development • conduct a publicity campaign in the local community to inform other people of the issues with a hope to enlist their support. Use stickers and slogans to spread the message further.

	<p>giii</p> <p>0/4 49</p> <p>1/4 20</p> <p>2/4 19</p> <p>3/4 8</p> <p>4/4 4</p> <p>(Average mark 0.97)</p>	<p>One mark for each process listed and 1 mark for each explained fully</p> <p>Processes given must be appropriate for the government to use when making a decision regarding this area. Community consultation needed to be linked to a more formal process, and police action was not appropriate. This is an area where students need more careful preparation as it is not sufficient to just quote from a list of learned processes – students must be able to adapt and interpret these processes to the given situation.</p> <p>Processes could include:</p> <ul style="list-style-type: none"> the government department responsible for the management of this Park could introduce regulations to zone the use of the area, specifying the nature of development allowed in areas of varying sensitivity the parliament could pass legislation to protect the area; could impose a total ban on development or restrict it or it could pass legislation allowing development the government department responsible could develop a management plan with community consultation the government could refer to the World Heritage regulations/guidelines have a government department or an independent body produce an Environmental Impact Statement on the planned development.
Question 4	<p>ai</p> <p>0/4 15</p> <p>1/4 15</p> <p>2/4 35</p> <p>3/4 17</p> <p>4/4 18</p> <p>(Average mark 2.07)</p>	<p>A number of students did not read this question carefully enough. The question indicates that the local Aboriginal group is not living a traditional lifestyle.</p> <p>Two marks each for each of two possible benefits fully explained</p> <p>Possible benefits include:</p> <ul style="list-style-type: none"> protection of their cultural sites if they are involved in the development increase the earning capacity of the area employment of a number of indigenous people as guides there may be increased opportunity to preserve and promote their history and culture increase in public understanding of Aboriginal culture and history.
	<p>aii</p> <p>0/2 15</p> <p>1/2 56</p> <p>2/2 29</p> <p>(Average mark 1.13)</p>	<p>One mark for each of two concerns listed</p> <p>Possible concerns include:</p> <ul style="list-style-type: none"> possibility of sacred sites, such as rock art, being desecrated traditional hunting rights may be threatened less likelihood of any future land rights claims being successful access to sacred sites may be restricted developers may not be sensitive to their needs/interests.
	<p>bi</p> <p>0/2 13</p> <p>1/2 56</p> <p>2/2 31</p> <p>(Average mark 1.18)</p>	<p>One mark for each of two concerns identified</p> <p>Concerns could include:</p> <ul style="list-style-type: none"> pollution of water due to increased human activity in the area deforestation causing erosion and decrease in water quality/yield increased risk of fire in the water catchment due to increased visitor numbers. developments causing erosion and siltation of the water supply area.
	<p>bii</p> <p>0/4 31</p> <p>1/4 28</p> <p>2/4 27</p> <p>3/4 10</p> <p>4/4 3</p> <p>(Average mark 1.27)</p>	<p>Two marks for fully describing an appropriate action and 2 marks for fully evaluating the action</p> <p>Possible responses include:</p> <p>Pollution of water: install composting toilets in areas of high usage and encourage minimal impact toileting procedures in remote areas using signage at entrances and other education campaigns. This would succeed in protecting water quality by reducing effluent flow from human activity into the water catchment areas</p> <p>Restrict development to buffer zone areas only and restrict all activities</p>

		<p>in prime catchment land: this would limit the possibility of contamination or siltation of the water supply.</p> <p>Deforestation: minimise tree loss by restricting the number of roads and tracks which are allowed and only allowing them in appropriate places. This means avoiding roads near water courses and on slopes which are too steep and which would lead to significant run off and erosion. Ban firewood collection. This would succeed in protecting water quality by avoiding siltation of water due to erosion and run off.</p>
<p>c</p> <p>0/3 25 1/3 24 2/3 32 3/3 19 (Average mark 1.45)</p>		<p>One mark for each of three effects on outdoor experiences explained in some detail</p> <p>Effects must be clearly linked to the outdoor experience, not just outline a change to the venue, and could include:</p> <ul style="list-style-type: none"> • increase in visitor numbers could lead to crowding and loss of solitary experience • increase in noise from more visitors could cause loss of tranquillity • increase in environmental degradation from more visitors could lead to loss of wilderness experience • an increase in safety due to more people being there if the user has an accident • increased enjoyment due to the opportunity to meet more people also interested in outdoor experiences as visitor numbers grow • as the area is developed the facilities and access will improve making the experience more relaxing and less demanding.
<p>d</p> <p>0/6 32 1/6 13 2/6 18 3/6 15 4/6 13 5/6 6 6/6 4 (Average mark 1.96)</p>		<p>Two marks for each of three appropriate improvements to the rock climbing sites which are consistent with sustainable development and with explanation</p> <p>Improvements could include:</p> <ul style="list-style-type: none"> • build tracks to the sites to restrict areas where soil becomes compacted and vegetation is damaged. This improves access to cliffs and also protects the area • develop a guidebook for the cliffs in the area which grades the climbs, this makes trip planning easier for climbers without affecting the environment; it may even aid the environment by limiting the numbers at the most difficult climbs, hence protecting these areas • limit the number of people who can access the area at any given time by introducing a booking system; as large numbers cause increased impact, numbers should be set at a level believed to be sustainable • build pit or composting toilets in areas where significant numbers are anticipated to minimise the pollution caused by human waste • build designated car parking and camping areas to ensure that damage to the environment is restricted to these small areas and can be planned to be as non-invasive as possible • zone wilderness or reference areas in those parts of the range which are particularly sensitive to ensure there is no development in these areas as it would not be environmentally sustainable • use signage in the area to alert people to environmentally sustainable practices for this area and also to explain why these areas are of environmental significance.
<p>e</p> <p>0/4 79 1/4 6 2/4 7 3/4 5 4/4 3 (Average mark 0.47)</p>		<p>One mark for naming a state government policy and 3 marks for evaluating its main features for the management of this area</p> <p>Policies could include:</p> <p>Flora and Fauna Guarantee Act: a statewide program to prevent further loss of habitat and maintenance of species. This act would identify whether there were endangered species or habitats in the area and require an action plan to be identified to protect these.</p> <p>Catchment and Land Protection Act: designed to protect water catchments and control noxious weeds and pest animals. Encourages community participation in management.</p> <p>Native Vegetation Retention Controls Act: designed to restrict the</p>

		<p>removal of native vegetation and would ensure there was no significant removal in the planned development of this area.</p> <p>National Parks Act: protects land of national significance, protects flora and fauna by effective management procedures, allows recreation compatible with park values.</p> <p>Biodiversity Strategy: fulfils commitments in the national strategy for the conservation of biodiversity and requirements under the Victorian Flora and Fauna Guarantee Act.</p>
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Question 5

Mark s	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Average 5.79
%	14	4	6	7	8	9	8	8	8	7	7	5	4	3	1	1	

Management practices: 2 marks for each of the three groups

Impacts: 2 marks for each of the three groups

Environmental sustainability: 1 mark for each of the three groups

Most students responded well to this longer form of question, although a number of students wasted considerable time writing about the perceptions of the various groups although the question did not ask for this. The table below lists some possible points which students could make in answering this question.

	Management practices (2 marks)	Impacts (2 marks)	Ecological sustainability (1 mark)
Indigenous Australians (Aboriginal)	<p>Hunter gatherers who collected and hunted for food, but as they moved on with the seasons, they did so without exhausting supplies</p> <p>Used fire stick farming</p> <p>Detailed knowledge of all aspects of the land, and its flora and fauna. Whole lifestyle reflected their role of caretakers of the land</p>	<p>Minimal in comparison with later developments although extinction of mega fauna and extensive changes to the ecology could have occurred as a result of Aboriginal occupation</p> <p>Fire stick farming used to regenerate grasslands, low temperature of burns did not destroy trees</p>	<p>Sustainable – use of fire and migration of tribal groups in search of seasonal foods</p> <p>Low population and mobility meant very little impact on the land</p>
Early European settlers	<p>Area seen as having a limitless supply of resources so no need for conservation, forests cleared to make farmlands, environment there to be used for ‘man’</p> <p>Introduced new species and changed water courses without thought of consequences</p> <p>Very little knowledge relevant to Australia. Knowledge of land practices in Europe of limited use in Australia</p>	<p>Land clearing led to erosion, salinity</p> <p>Introduced species threatened native animals, and caused erosion, e.g. fox, rabbits</p> <p>Introduced plants competed with native flora, e.g. blackberry</p>	<p>Generally not – although some had consciousness of destruction that was occurring and called for more caution</p>
Contemporary Australians (current)	<p>Some still see limitless supply of resources but others husband resources.</p> <p>Greater awareness of sustainable development practices, revegetation, use of plantations and recycling, need to control introduced species</p> <p>Recognition of conservation as legitimate use of the environment, declaration of national parks. Tourism potential of environment recognised</p>	<p>Impact of land clearing on greenhouse effect, erosion</p> <p>Agribusiness is helping with revegetation</p> <p>Alterations to river levels for irrigation and water supply causing salinity habitat destruction</p>	<p>Growing concern for the long-term sustainability of land management practices, and also for the degradation which has already occurred.</p>

	Need environmental effects statements before developments		
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