



2004 Outdoor and Environmental Studies GA 3: Written examination

GENERAL COMMENTS

Most students appeared to have sufficient time to complete the paper. The format of the question and answer booklet gave a good indication of the depth of answer required for each question as did the key words in the questions. Words such as **explain, describe, analyse or evaluate** indicated that an answer with some depth was required; words such as **identify or outline** indicated a shorter answer was sufficient; and **list** required only a list. Students need to ensure they read the question carefully so they accurately interpret what is required in their answer.

Where a longer answer is required, students are strongly advised to complete a brief plan of their answer first; there are a number of spaces within the booklet which can be used for this. A plan enables students to note the main ideas they will cover and to order their response before they start.

Students need to use their examination time efficiently. Students should use the reading time effectively to ensure they have an understanding of each question. When answering the paper, students should not rewrite the question as this wastes valuable time. The use of key words from the question in the answer is, however, advised, as it often helps to keep the response on track.

In preparing for this examination, students need to be familiar with a range of outdoor environments, and with varying types and levels of human impact. When asked to identify a specific outdoor environment in answering a particular question, the choice of venue is critical – it must be one that will readily enable them to thoroughly address the given question.

Some questions asked for a specific number of responses – students who gave additional responses **did not** receive additional marks. Responses were marked in the order presented and extra responses were not taken into account. If a student thinks of a better response after finishing their initial answer, they should cross out the answer that they feel is the weakest and add the extra response. If there is insufficient room, the margins or other spaces may be used as long as the response is clearly labelled. A number of students failed to score maximum marks in some questions by listing a variety of responses when only one was asked for. Students are advised to choose their one strongest response and fully describe it rather than just giving a list of possible responses.

Students need to understand study specific terms such as **strategies, management strategies, processes, policies, influences, views and images**. Teachers are advised to consult previous Assessment Reports as well as this one to obtain a broad range of possible examples of these study specific terms. Students also need to be able to use these terms in the context of specific questions and give appropriate examples rather than quoting general definitions.

Students are advised to be as specific as possible and enrich their answers with appropriate examples wherever possible to indicate the depth and breadth of their knowledge; sweeping general statements do not attract many marks. Students are also advised against using emotive language, which was particularly apparent in relation to interest groups and environmental impacts. All points of view were credited as long as they were well justified; however, sweeping statements about the motives of individuals or groups were not appropriate.

SPECIFIC INFORMATION

Question 1

1a

Marks	0	1	2	3	Average
%	1	3	13	83	2.8

Possible responses:

- commercial: air travel, motor racing, retail shopping centre, vineyard, fishing village
- conservation: the Koala Forest visitors' centre, treetop boardwalk, The Inlet national park
- recreation: walking, surfing, swimming, bird watching, fishing, motor racing.

One mark each was given for identifying a commercial, conservation and recreation use of this environment. Answers given must have come from the information given on the map, for example giving The Caves or The Cape as a conservation use did not attract marks as there was no evidence of conservation occurring at these venues.

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Students could only use each example in one category; therefore if, for example, either fishing or motor racing was given in more than one category, only one mark was awarded.

1b

Marks	0	1	2	3	4	Average
%	8	16	35	25	16	2.3

Possible responses:

The Koala Forest has experienced the greater impact as:

- the visitors' centre increases the number of tourists
- larger tourist numbers means increased soil compaction
- building the centre and the boardwalk impacted on remnant vegetation
- more people, especially amongst international tourists, want to see koalas than wading birds, so visitor numbers will be higher, resulting in a higher impact.

The Inlet has experienced the greater impact as:

- the wetlands are a more fragile environment
- the adjacent fishing village impacts on the area
- a lack of management strategies leaves the area open to uncontrolled impact
- development at The Koala Forest has been planned to preserve biodiversity; such planning is absent at The Inlet.

For full marks, students could either provide four reasons why the venue given has had a greater impact, or give two reasons with detailed explanations. Either venue was accepted so long as the impact was well justified.

1c

Marks	0	1	2	Average
%	18	50	31	1.2

Possible responses:

- the area is managed with a view to reducing impact, it places conditions on the types of use that are acceptable
- the treetop walk reduces the impact on remnant vegetation caused by high foot traffic
- people are restricted as to where they can go so as to reduce their impact on the koala population
- the educational role of the visitors' centre increases awareness of koala populations and ecologically sustainable development.

One mark was given for each of two points made as to how the establishment of The Koala Forest contributes to ecologically sustainable development.

A number of students defined ecologically sustainable development; however, the question did not require such a definition.

1d

Marks	0	1	2	3	4	5	6	Average
%	3	6	14	20	23	18	16	3.8

1di.

Possible responses:

- do not visit the bird colony during the breeding season
- stay on the tracks, especially in the wetland
- don't leave litter and collect any that may already be there so as to not interfere with the birds' feeding habits
- do not light fires
- visit in small groups and travel quietly.

One mark was awarded for identifying an individual action and another mark for explaining how it minimises impact. Many students listed a number of actions, but only one response was needed and this needed to be fully developed.

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Answers such as 'do not litter' or 'follow fishing regulations' did not attract marks as they were regarded as trivial because they just reinforced current regulations. Likewise, although the response 'take only photos and leave only footprints' is an acceptable attitude, this could not be regarded as an **action** – a more specific reply was needed.

1dii.

Possible responses:

- restrict visitors numbers each day to sustainable levels
- develop an education centre at the visitors' centre to show people how to protect koalas and help them develop appropriate behaviour
- eradicate introduced species such as foxes, wild dogs and cats, which will reduce the impact on the koala population
- impose penalties on visitors who do not follow guidelines so that such behaviour is discouraged
- manage the fire regime of the area to prevent harmful wildfires while conducting regeneration burns as appropriate
- charge entrance fees to pay for infrastructure such as signage, car parks, toilets etc.

One mark was given for identifying each of the two management strategies and one mark each for explaining how each reduces impact

Answers to this question needed to relate to the actual environment described. When selecting from a learned list of management strategies, students needed to interpret their answers in the context of this environment. Maximum marks were more readily obtained from using two very **different** strategies, for example 'restricting group sizes' and 'limiting overall numbers' were too similar to be fully developed independently.

Answers also needed to be realistic – fencing off the entire area or banning food are not real possibilities. Some students were confused between a code of conduct and a set of rules and regulations; while both were acceptable, they are not the same.

1e

Marks	0	1	2	3	4	5	6	Average
%	17	6	15	19	19	13	11	3.0

1ei.

An example of a possible response:

- RAMSAR: an international treaty which encourages international cooperation and local action for the conservation and wise use of wetlands.

Other possible responses could include:

- World Heritage listing
- flora and fauna guarantee
- National Parks Act

One mark was given for naming an appropriate government or international policy and another mark for describing it.

1eii.

Possible responses:

- this policy would limit the type of activity which may be undertaken in the area and limit the number of participants allowed
- adherence to this policy may attract funding for research and the provision of infrastructure to protect the area
- the policy may attract publicity and make people more aware of the need to protect the area.

One mark was awarded for each of two points made and a further mark for each for explanation.

Question 2

2a

Marks	0	1	Average
%	41	59	0.6

Species biodiversity is the range of species present in a particular area.

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2b

Marks	0	1	2	3	4	Average
%	47	14	16	8	15	1.3

- genetic diversity: the range of genetic material within a population
- ecosystem diversity: the range of habitats present, the communities and the ecological processes occurring in this environment.

One mark was awarded for naming the process and another mark for describing genetic diversity and ecosystem diversity.

2c

Marks	0	1	2	3	Average
%	9	23	41	27	1.9

Possible responses:

- such a large group working in the area could cause soil compaction on study sites
- the group may trample on fragile vegetation
- weeds or diseases may be introduced on tyres or shoe soles
- fauna may be disturbed by the presence of such a large group
- vehicles may be driven over fragile vegetation
- long-term improvements to management as a consequence of research results.

One mark was given for each of three ways the biologists may impact on the park. These impacts could be positive or negative. Again, leaving litter was regarded as a trivial response.

2d

Marks	0	1	2	3	4	Average
%	19	13	28	16	24	2.2

Possible reasons:

- biodiversity is important because it is the basis of the planet's health. It provides the necessities of life, such as food, clothing, shelter and fresh air to breathe
- genetic diversity enables crops and animals to adapt to different environments and growing conditions. Such production is important for adequate food supply worldwide. Genetic uniformity makes crops far more susceptible to disease
- many medicines are derived from plants; others yet undiscovered will also no doubt come from such sources
- biodiversity maintains the land in a way that allows people to use it for a variety of recreational uses
- in contemporary society it is important for people to still have wild places for their aesthetic value and also for peace of mind and relaxation
- maintaining biodiversity is important in preserving the planet for future generations.

One mark each was awarded for identifying **two** advantages and a further mark each for providing an explanation.

The question required the consideration of **advantages to future human societies**, so biodiversity for its own intrinsic value was not an acceptable answer. It was also apparent that a large number of students were confused about the difference between intrinsic and aesthetic value. The use of the term 'intergenerational equity' was also not sufficient – this is more of an ethical position than an advantage within the context of the question.

Question 3

3a

Marks	0	1	2	Average
%	47	37	16	0.7

The image could:

- attract media publicity and increase public awareness of the issue and consequently put pressure on the decision makers
- make an impressive poster/t-shirt/car sticker for use in public places, again to raise awareness
- be distributed on a postcard appealing to the public to post it to the decision makers and express their opinion on the most appropriate outcome

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- be used in magazines as an advertisement for support
- be used as publicity when collecting signatures on a petition
- be used on a publicity web page.

One mark was given for each of two ways this image could be used to influence decision makers.

3b

Marks	0	1	2	3	4	Average
%	17	20	37	16	10	1.8

Possible responses:

- people may identify this as a beautiful, pristine environment where uranium mining would not be appropriate
- people may see the lack of commercial or recreational development as a good thing and demand the area be left as is
- people may see the commercial potential in a relatively remote area as a good thing which would have little impact on their lifestyle
- people could see the extremes to which others will go to bring publicity to their cause and this may cause them to pay more attention to the issues involved.

Two marks were available for each of two impacts; both required some description.

3c

Marks	0	1	2	3	4	Average
%	13	15	23	29	20	2.3

3ci.

Possible responses:

- an image I have studied this year is of Lake Pedder before it was flooded, this image showed a pristine and unique environment
- Cathedral Ranges is an area where I have worked hard to learn climbing skills, my image of this environment is as a gymnasium
- the Victorian Alps is an area of great importance to me; my image of this environment is as a museum to be preserved at all costs.

Describing an actual environment was not a sufficient answer to this question.

3cii.

Possible responses:

- the beauty of Lake Pedder in its natural state was so stunning that I could not believe that it could be destroyed. Even if hydro power production is 'clean', it is not worth losing such pristine and unique environments, this image has made me more aware of the need to be vigilant in protecting our environment
- as I use the Cathedrals' environment to push my own physical limits, I do not take a great interest in the environmental issues at the place. Issues such as soil compaction around climbing sites and the destruction of vegetation caused by trying to find new climbs are not relevant to me, as long as I can climb
- the Alps are an important area to preserve and so the issue of removing cattle grazing from the area is one I am prepared to take action on to achieve.

One mark was awarded for identifying a particular environmental issue and one mark each (up to two) for points made about how the image described above has influenced student's view about this environmental issue.

The actual image described had to be linked to a change in view to attract full marks, it was not sufficient to describe the effect that visiting a particular venue had in changing a view.

Question 4

4a

Marks	0	1	Average
%	28	72	0.7

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The conflicting interests are the commercial interest of wanting to mine uranium and the conservation interest of wanting to preserve a World Heritage area that has cultural significance to the indigenous people.

One mark was available for listing conflicting uses of the land; no marks were given for just listing the interest groups.

4b

Marks	0	1	2	3	4	5	6	Average
%	6	2	8	11	29	24	20	4.1

Possible responses:

- **mining company:** the mining project and processing plant offer an excellent opportunity to make a substantial profit as well as offering employment and financial security for local residents. The environmental impact statements show the plan can be implemented with minimal environmental impact and it should be allowed to go ahead
- **federal government:** the environmental impact statements provided by the mining company suggest that mining would cause no problems to Kakadu and the economic advantages to the region and the country in general indicate that the mine should proceed
- **conservationists:** this area is of world significance for its natural and cultural features and as such should be preserved in its natural state for future generations and mining should not be allowed. Any mining in Jabiluka will have to impact on the surrounding wetlands
- **Mirrar people:** they are the custodians of their traditional lands and have been for 40 000 years. They believe the land should be protected and that they have a right to continue their traditional lifestyle. This land is central to the continuation of their culture.

One mark each was given for naming two **opposing** interest groups, and up to two marks each for outlining their positions in detail.

Emotive comments such as 'they do not care what they do to the environment' cannot be substantiated from the information given and did not attract marks.

4c

Marks	0	1	2	3	4	Average
%	42	17	22	11	7	1.3

Possible responses:

- the federal government could apply to have the Jabiluka area included in the Kakadu World Heritage listing. Mining the area would conflict with the aims of such a World Heritage declaration. Mining would be very difficult to achieve after such a listing
- the traditional owners of the land could take their case to court and argue that mining would compromise their traditional lifestyle and that they have had a connection with this land for 40 000 years, citing the precedent of the Mabo case
- the government could have the responsible department review the mining company's environmental impact statement and possibly conduct its own research as well.

One mark each was awarded for naming two processes and a further mark each for explaining the processes.

Students needed to read the question carefully in order to not waste time giving information that was not required. Students were **not** asked to evaluate the advantages and disadvantages of these processes and such comments did not attract marks.

Many students were still confused about the difference between strategies and methods in the context of this study. Teachers are advised to use Assessment Reports for previous papers to prepare an appropriate list of each for student use.

Processes chosen needed to be appropriate to this case and put in the context of this situation to achieve full marks.

4d

Marks	0	1	2	3	4	5	6	Average
%	45	16	10	9	10	6	5	1.6

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4di.

Possible responses:

- for the Franklin conflict, another decision making process was for the federal government to **pass legislation** outlining the type of use allowed for this land
- for cattle grazing the Victorian Alps, **zoning** is a relevant decision making process. Some fragile areas, such as summits, are not allowed to be grazed, while other areas are available
- when increased development at Wilsons Promontory was suggested, a **management plan** was drawn up with community consultation.

One mark was awarded for naming a process and one mark for describing the conflict for which it was used.

4dii.

Possible responses:

- passing legislation could reduce the potential for environmental impact if the legislation banned mining in the long term, alternately it could increase the potential for impact if mining was allowed
- zoning would not be effective in Jabiluka as the issue is whether there should be mining at all rather than where the mining occurs. Zoning would possibly still allow mining in some areas and consequently increase the impact of human use on Jabiluka.

One mark (up to total of four) was awarded for each point made in relation to the effectiveness of the given process in reducing environmental impact on Jabiluka.

Question 5

Marks	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Average
%	5	3	6	6	7	7	7	8	9	8	9	7	6	5	3	3	7.3

It was critical that students chose an appropriate outdoor environment in order to be able to fully respond to all aspects of this question. For example, an area where there was no evidence of Aboriginal involvement was inappropriate, as full marks could not be achieved. An area with a broad range of past and current human impacts and perceptions was required. Some students chose an area which they had studied in relation to a particular environmental issue and consequently their knowledge of the area was too narrow to answer the question fully.

Students are strongly advised to prepare a **brief** plan for the essay before they began to write it. They also need to read the question carefully to isolate what is specifically required, and to avoid covering topics not included in the question as such additions do not attract marks. Some students had obviously prepared answers to similar questions on previous papers but failed to adjust their comments to the requirements of this question.

Good responses to this question gave accurate and specific information for the area chosen.