



## Cambridge International AS & A Level

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THINKING SKILLS

9694/22

Paper 2 Critical Thinking

May/June 2021

MARK SCHEME

Maximum Mark: 50

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**Published**

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

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

Cambridge International will not enter into discussions about these mark schemes.

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This document consists of **10** printed pages.

**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

**GENERIC MARKING PRINCIPLE 1:**

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

**GENERIC MARKING PRINCIPLE 2:**

Marks awarded are always **whole marks** (not half marks, or other fractions).

**GENERIC MARKING PRINCIPLE 3:**

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

**GENERIC MARKING PRINCIPLE 4:**

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

**GENERIC MARKING PRINCIPLE 6:**

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

**ANNOTATIONS**

	In Qs 1, 3 and 4 use to indicate where marks have been awarded.
	Use to indicate an answer or element that is wrong.
	Not good enough.
	Benefit of doubt.
	In Q5 use to indicate creditworthy other argument element In Q3 use to indicate 'significant additional element'.
	In Qs 2 and 5 use to indicate 'conclusion'.
	In Qs 2 and 5 and in short questions where indicated, use to indicate that marks have been capped because an essential element of the answer is absent.
	In Q2 use to indicate creditworthy evaluation of a source.
	In Q5 use to indicate creditworthy intermediate conclusion.
	In Q2 use to indicate creditworthy personal thinking. In Q3 use to indicate paraphrase.
	In Q2 use to indicate creditworthy inferential reasoning. In Q5 use to indicate creditworthy reason used to support a conclusion.
	In Q2 use to indicate creditworthy use of a source. In Q5 use to indicate distinct strand of reasoning.
	In appropriate cases, use to indicate significant omission. In Q3 use to indicate 'significant omission'.
	Use in answers when no other annotations have been used. Use on blank pages.
<b>Highlight</b>	Use to draw attention to part of an answer.

There must be at least one annotation on each page of the answer booklet.

Question	Answer	Marks
1(a)	It weakens the case being made in Source A [1] as it suggests dishwasher ownership could create unnecessary washing up [1] which could lessen the environmental/financial benefits of owning a dishwasher [1].	3
1(b)	<p>One would need detailed information about the environmental impact of washing only partial loads as compared to handwashing the same dishes / whether the proportion of households that run partial loads is large enough to make the dishwasher overall have a negative environmental impact.</p> <p><i>2 marks for clearly identifying either of these points</i> <i>Or 1 mark for a vague version of it</i> <i>plus 1 mark for any relevant example, e.g.</i></p> <p>How partial such loads are, how often they are run, what proportion of washing-up is done by hand and by machine / what proportion of households run partial loads etc.</p>	2
1(c)	<p>It might act as a deterrent because the information is from a credible source with expertise on environmental issues [1] However, the information simply suggests one should make sure that one buys a machine produced in an environmentally friendly way [1]. It fails to explain why determining environmental impact of manufacture is 'extremely difficult' [1]. The factors mentioned seem quite objective and could be reasonably easy to determine [1].</p> <p>On the other hand, it might be very difficult for a consumer to find this information [1]; also, there may in fact be little scope for reducing the environmental impact of manufacturing a dishwasher [1]. Furthermore, it seems likely that, even if the amount of environmental impact from manufacture can vary, this difference would be negligible when compared to the overall benefit over the lifetime of the dishwasher [1]. So it may not be true that the debate "needs to take [this] into consideration".</p>	3
1(d)	<p>There may be other reasons why dishwasher ownership has been increasing [1], e.g. they have become cheaper, they have become more efficient, the population have become wealthier, they have been successfully marketed, people increasingly prefer the convenience of owning one, etc.</p> <p><i>1 mark for any valid example</i></p>	2
1(e)	<p>Its credibility is increased through expertise [1]. The manufacturer would have a vested interest to exaggerate the usefulness of their product [1]. On the other hand, there is an element of 'reverse vested interest' in advising about limited suitability / the need for a water softener [1]. However, this could simply be focussing on the appropriate market for commercial reasons [1]. The manufacturer is likely to have other products that would be suitable for families and could promote them accordingly [1]. The claims about water use and energy efficiency are vague [1] and give insufficient grounds for concluding that the costs would be at a 'manageable level' [1].</p>	4

Question	Answer		Marks
2	<b>Conclusion</b>	1 mark for an explicit supported conclusion <i>Cap at 7 if conclusion is absent or implicit</i>	8
	<b>Use of sources</b>	2 marks for use of 4 sources 1 mark for use of at least 1 source	
	<b>Evaluation of sources</b>	1 mark for each valid evaluation of the credibility or quality of reasoning in sources <i>Maximum 3 marks</i>	
	<b>Inferential reasoning</b>	1 mark each <i>Maximum 3 marks</i>	
	<b>Personal thinking</b>	1 mark each <i>Maximum 2 marks</i>	
	<p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>• Source A gives research evidence from a reliable scientific source in favour of the proposition.</li> <li>• However, the claim in Source A that a dishwasherful of dishes would take a minimum of 42 gallons of water to wash by hand seems implausible/an exaggeration.</li> <li>• Source B suggests a problem with the assumptions behind the research in Source A.</li> <li>• However, the source has an anti-technological bias</li> <li>• and more information is needed in order to assess the significance of the point made.</li> <li>• Source C suggests further problems with the claims in Source A.</li> <li>• However, the issues raised are easily dealt with if somebody wanted a 'green' dishwasher.</li> <li>• Source D gives statistical evidence showing a steady rise in dishwasher use in the UK.</li> <li>• However, it is only applicable to one country</li> <li>• and gives no evidence that dishwashers are environmentally friendly</li> <li>• or the purchase of them is motivated by environmental concerns.</li> <li>• Source E gives measured, expert advice.</li> <li>• However, it only refers to large catering size machines</li> <li>• and the claims made are as much to do with cost and efficiency as environmental protection.</li> </ul>		

Question	Answer	Marks
2	<p><b>Annotate answers as follows:</b></p> <p><b>CON</b> To indicate ‘conclusion’.</p> <p><b>S</b> To indicate creditworthy use of source.</p> <p><b>EVAL</b> To indicate creditworthy evaluation of source.</p> <p><b>R</b> To indicate creditworthy inferential reasoning.</p> <p><b>P</b> To indicate creditworthy personal thinking.</p> <p><b>C</b> To indicate that mark has been capped.</p>	

Question	Answer	Marks
	<p><i>In Q3, annotate as follows:</i></p> <p><b>AE</b> Significant additional element</p> <p><b>^</b> Significant omission</p> <p><b>P</b> Paraphrase</p> <p><i>In Q3(a), (c), (d) and (e), if two answers are given, one of which is correct, award 1 mark.</i></p> <p><i>In all parts of Q3, apply guidance relating to additional material <b>only</b> if it constitutes an additional part of an answer or an alternative answer.</i></p>	
3(a)	<p>2 marks for an exact answer 1 mark for a paraphrase, or for <b>one</b> additional element or omission</p> <p>This principle should be rejected.</p>	<b>2</b>

Question	Answer	Marks
3(b)	<p><i>For up to 2 of the following: 2 marks for an exact answer 1 mark for a paraphrase, or for <b>one</b> additional element or omission</i></p> <ul style="list-style-type: none"> <li>• (and so) it [taking action to save vulnerable animals from predators] is justified.*</li> <li>• It is inconsistent to intervene in one case but not the other.</li> <li>• When wildlife programme makers help to save prey from a predator they are simply engaging in this sort of charitable intervention.</li> <li>• We are therefore justified in taking action to stop animals from treating each other cruelly in the natural world.*</li> <li>• We should not stand aside and watch as an innocent animal dies in the jaws of an aggressive predator.</li> </ul> <p><i>* Although 1 and 4 are very similar, credit both as author supports each with different reasoning in each paragraph.</i></p>	6
3(c)	<p><i>2 marks for an exact version of any of the following 1 mark for an incomplete or vague version of any of the following</i></p> <ul style="list-style-type: none"> <li>• That sharing with an animal the characteristics of experiencing pain and fear is a sufficient reason for treating children and animals as equivalent.</li> <li>• That the extent or quality of pain/fear experienced by human children and other species are similar.</li> <li>• That humans do not have a greater obligation to fellow-humans than to other species.</li> <li>• That human children are not more important/do not have a higher moral standing than other species.</li> </ul>	2
3(d)	It is a reason <b>[1]</b> supporting the intermediate conclusion ‘we should not stand aside...aggressive predator’ <b>[1]</b> .	2

Question	Answer	Marks
4(a)	<p>It begs the question <b>[1]</b> as to whether one can make a distinction between observing and intervening in nature <b>[1]</b>  OR stipulative definition <b>[1]</b> of what constitutes interference with nature <b>[1]</b>  OR equivocation <b>[1]</b> as to the meaning of intervention <b>[1]</b>  OR it relies on the questionable* assumption <b>[1]</b> that there is no distinction between observing and intervening in nature <b>[1]</b>.  OR slippery slope <b>[1]</b> – the argument jumps from (probably unobtrusive) filming of wild animals, to justifying physical intervention <b>[1]</b></p> <p><i>* Must include this word or similar for the mark</i></p>	2
4(b)	Intervention to rectify disruption to the natural world by human activity <b>[1]</b> is conflated with intervention in the normal pattern of life in the natural world <b>[1]</b> .	2

Question	Answer	Marks
4(c)	<p>There is an assumption that moral codes can be applied to animal behaviour (<i>or equivalent concept</i>) [1]. Whilst it raises a number of complex questions, animals would normally be seen as acting in an instinctual way and without any cruel intent [1].</p> <p>There is an assumption that preventing predators from taking their prey for food is not in itself cruel [1]. The predator might starve/fail to feed its young [1]</p>	<b>2</b>
4(d)	<p>It is inconsistent with the argument as a whole [1]. If our ancestors killing animals to eat can be defended as necessary and not subject to moral sensibilities, then clearly this is simply the case for animals now [1].</p> <p>Therefore, there is no case for wildlife programme makers intervening in the animal kingdom on moral grounds [1].</p>	<b>2</b>



Question	Answer		Marks
5	<b>Reasons</b>	2 marks for three or more reasons supporting conclusions 1 mark for one or two reasons supporting conclusions	8
	<b>Inferential reasoning</b>	1 mark for each use of an intermediate conclusion or chain of intermediate conclusions <i>Maximum 3 marks</i>	
	<b>Argument elements</b>	1 mark for each use of other argument elements that strengthens the reasoning: counter with response, example, evidence, analogy, hypothetical reasoning <i>Credit each type only once per strand of reasoning</i> <i>Maximum 3 marks</i>	
	<b>Structure</b>	1 mark for two or more distinct strands of reasoning	
	<p><i>Each component of a candidate response may score only once. Where there is more than one possibility, use the classification which leads to the higher total mark.</i></p> <p><i>Maximum 6 marks for no conclusion or wrong conclusion, or a conclusion that does not follow from the reasoning, or if both sides are argued without a resolution.</i></p> <p><i>0 marks for answer unrelated to the claim given.</i> <i>No credit for material merely reproduced from the passage.</i></p> <p><b>Annotate answers as follows:</b></p> <p><b>CON</b> To indicate main conclusion.</p> <p><b>R</b> To indicate creditworthy reason used to support a conclusion.</p> <p><b>I</b> To indicate creditworthy intermediate conclusion.</p> <p><b>AE</b> To indicate creditworthy other argument element.</p> <p><b>S</b> To indicate distinct strand of reasoning.</p> <p><b>E</b> To indicate that mark has been capped.</p>		

Question	Answer	Marks
5	<p><b>Example 8-mark answers</b></p> <p><i>Support (138 words)</i></p> <p>The evolution of human society has always involved exploiting the natural world. Vast swathes of land are now treeless as a result of human activity. This process is still going on. For example, the tropical rainforests in the Amazon are fast disappearing in order to clear land for the raising of cattle. This process has been going on for millennia so there is no reason to believe it can be halted.</p> <p>Whilst there have been attempts to control the ravaging of the natural world by human activity, these attempts have not been successful. This is because powerful vested interests manage to frustrate the effective implementation of international agreements. So, there is little hope that this exploitative relationship can be reversed.</p> <p>Therefore, the continued development of human society is not compatible with the preservation of the natural world.</p> <p><i>Challenge (153 words)</i></p> <p>Before the emergence of industrialism, humans lived in harmony with the natural world. This shows that a way of life that preserves rather than destroys the natural world is possible. So, it is an achievable aim for humans to create a more sustainable form of existence.</p> <p>Whilst it has been difficult to achieve global action to halt the exploitation of the natural world in the past, there are signs that this will change in the future. Young people, many of whom will see in the next century, realise that human life of any sort will be difficult to sustain when this point in time is reached unless radical action is taken to preserve the planet and the life forms it contains.</p> <p>So, if human beings re-establish an ability to live in harmony with nature then all life on the planet will be preserved. This means that continued development of human society is compatible with the natural world.</p>	