

# **Critical Thinking**

Advanced GCE A2 H450

Advanced Subsidiary GCE AS H050

## **Mark Schemes for the Units**

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**H050/H450/MS/R/08**

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**Advanced Subsidiary GCE Critical Thinking (H050)**

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# F491 Credibility of Evidence

## Section A: Assessing the credibility of documents

- 1 There may be weaknesses in the credibility of reporting about the environmental impact of many products (other than) nappies.

Explain three possible weaknesses in the credibility of such reporting. [6]

Credit any three developed correct weaknesses. [3x2]

Credit 1 mark out of 2 for answers that assess the specifics of disposable nappies. The context may be supplied by some reference to the documents.

Do not credit generalised assessments that could fit any context.

Candidates may be credited for more than one point in each section.

Examples of developed correct answers:

In the context of such types of dispute:

### **There may be motives/vested interest**

for stakeholders e.g. manufacturers and retailers of products

- to selectively present evidence to promote the eco friendly nature of their product in order to increase sales.

for the government

- to selectively present data to try to influence the public to choose products that are more eco friendly.

for non-independent research agencies

- to selectively choose those aspects that support their products.

### **There may be difficulties in perceiving the true impact on the environment**

- those reporting may not be fully aware of all the product factors (partial ability to observe) influencing environmental impact and therefore have a partial understanding of the issue.
- those reporting eg consumer groups, may not have the relevant expertise to make informed judgements about the ecological impact of products.

### **There may be difficulties in judging the truth of the reports**

- if data is specific to particular areas of expertise eg atmosphere or rivers, it may be difficult to access other data to confirm or refute claims made in reports.

[AO3 6] [6]

**2 Consider the data in the caption boxes to the images in Documents 3 and 4.**

**Referring to the data, assess which plan might be more effective. [2]**

Credit two marks for a correct assessment that is reasoned with reference to the data. Both sides need not be developed but a comparative word needs to be present e.g. 'more'. [2]

Assessments may relate to either the environment, cost or duration.

For example with reference to the environment:

The recycling plant would aim to take slightly more out of landfill over a two year period i.e. 40,000 tonnes of waste as opposed to WRAP's national target of 35,000 tonnes and so might be more effective in terms of environmental impact.

Credit one mark for a correct assessment that includes a comparison as above, without reference to the data. [1]

For example with reference to cost:

The cost for the building of the recycling plant is less than the funding for the real nappy scheme and so might be more cost effective, although the running costs have not been stated.

Credit no marks for a statement that does not include a comparison.

[AO2 2] [2]

### 3 Consider the credibility of Documents 1 and 5.

For each document make **three** points of assessment, each of which should:

- identify a relevant credibility criterion
- use this to assess the credibility of the documents
- make reference to the text to support your assessment.

**[18]**

Credit <b>1 mark</b>	For each <b>correctly</b> identified criterion of credibility (determine this from the assessment). A synonym or equivalent phrase is acceptable for the criterion.
<b>a second mark</b>	If this is used to correctly assess the document. Strengthening or weakening may be implicit.
<b>an additional mark</b>	If it is correctly supported from the text – <i>italicised below</i> . A quote in the form of a claim is not necessary, but if used, it should be relevant to the assessment.
<p>for answers that evidence partial performance, credit one mark (a maximum of 6x1 mark for this question)</p> <ul style="list-style-type: none"> <li>• for an answer that demonstrates a clear understanding of a credibility criterion from the assessment given but incorrectly assess the document</li> <li>• or where the candidate correctly assesses individual sources within the document that would affect its credibility, but does not relate these to the assessment of the document itself.</li> </ul>	

Examples of correct answers that would gain three marks:

<b>AHPMA</b>	Reputation/VI	Possible VI to represent the facts correctly, to maintain the credibility of their company to represent key manufacturers.	AHPMA ' <i>..... is the trade association that represents the key manufacturers of disposable nappies</i> '
	Vested interest	Possible VI to selectively present evidence to support the financial interests of the manufacturers it represents.	AHPMA ' <i>..... is the trade association that represents the key manufacturers of disposable nappies</i> '
	Bias	It presents a one sided account using evidence that supports its case.	'UK Environment Agency' statement
	Selectivity	It uses data that is 3 years out of date, probably representing less waste than at the time of writing the news release.	'2002'
	Neutrality	It uses data to support its case from independent sources.	'...carried out by independent environmental consultants'
	Ability to observe	It uses secondary source evidence to support its claims which may be subject to the interpretation of the originators.	'UK environment Agency states' 'Government strategy Unit report'
	Expertise	It uses the data and conclusions from sources that have relevant expertise in the field.	'.....carried out by independent environmental consultants'

<b>The Ecologist</b>	Reputation/VI	Possible vested interest to give data that represents the situation accurately to maintain public confidence in their specialist magazine.	as indicated by their name, <i>'The Ecologist'</i> and claim <i>'For 35 years The Ecologist has set environmental and political agendas around the world'</i>
	Neutrality	As a specialist magazine dealing with issues that affect the environment, it has no vested interest to misrepresent data.	as indicated by their name, <i>'The Ecologist'</i>
	Bias	It presents a one sided account presenting data to show the negative impact of reusables.	<i>'but don't want to harm the environment? Then use reusable nappies'</i>
	Expertise	As a specialist magazine dealing with the effects on the environment, the article might be expected to draw upon relevant expertise to support its views.	as indicated by their name, <i>'The Ecologist'</i> and the author of the argument, <i>the Green pages editor'</i> .

3 x 3 marks as above for each of the 2 documents [AO2 18] [18]

**Total Marks for Section A AO2 [22] AO3 [6] [26]**



**Section B: Assessing the credibility of evidence**

**4 Consider the claim made by the UK Environment Agency in Document 1 about the way in which the study was ‘carried out’.**

**(a) State what might be implied by this claim. [1]**

Credit the following or similar:

**Implication:** (2x1 mark)  
that the findings of the study are acceptable/credible/reliable/unbiased.

**(b) The study looks at the environmental evidence of the impact of both disposable and reusable nappies.**

**State one other factor that might influence parents when choosing which type of nappy to use. [1]**

Credit one of the following or similar:  
cost, practicality, health, moisture retention, obtainability.

[AO1 1, AO3 1] [2]

5 Consider the claims made by the former Waste minister in Document 2 and WEN in Document 4.

Assess the credibility of their evidence. For each of these sources make two points assessment, each of which should:

- identify a claim made
- assess how this is strengthened or weakened by any relevant credibility criterion
- state what you must suppose to be true in order to reach your assessment.

[20]

Credit 1 mark for a relevant claim – (italicised below), even if the assessment that follows is incorrect [2x2]

Credit 1 mark for correctly identifying whether this is strengthened or weakened.

Credit 1 mark by a relevant criterion that is correctly used to assess credibility.

Plus up to 2 marks for stating what is supposed to be true to make this assessment. For partial performance, credit one mark, if the suppositional reasoning is circular.

Examples of answers that would gain five marks:

Former waste minister	Reputation/ Vested interest	s	His claim, ' <i>None of the systems studied were more or less environmentally preferable</i> ' might be strengthened by his vested interest to tell the truth as a parliamentary minister	if he wishes to avoid the displeasure of the Commons or his constituency if found to be misrepresenting the truth.
	Neutrality	s	This claim, might be strengthened by the independent nature of the study	if the study's self acclaimed independence is correct.
	Expertise	s	This claim might be strengthened by the fact that he is no longer the Waste Minister and therefore may be more independent of government views	if we suppose that he is not now a consultant to the disposable nappy industry.
	Expertise	w	His claim, ' <i>it might be possible to leave them in garden compost bins</i> ' would be weakened by his lack of expertise as an MP to make a specialist informed judgement	unless he based this claim on expert research.

<b>WEN</b>	Vested interest	w	Its claim, ' <i>Government funding was not a waste of money</i> ' might be weakened by a possible vested interest to support other organisations in favour of reusable nappies	<b>if</b> by supporting WRAP, this gave more credibility to their own claims.
	Bias	w	Its claim, ' <i>The Environment Agency study...is seriously flawed</i> ' might be weakened by their selective focus upon the effects from waste	<b>if</b> they have not balanced this with other effects from washing reusables eg pollution to the water courses.
	Expertise	s	Its claim, ' <i>Parents can....despite reports to the contrary</i> ' might be strengthened by expertise in the environment and health, as indicated in their aim	<b>if</b> as a charity they are able to attract finance to research these areas.
	Bias	w	Any of these claims may be biased by the female perspective stated as their aim	<b>if</b> this refers to female orientated views, rather than female orientated issues.

s = strengthens w = weakens credibility

[AO2 15] [4x5] [20]

**6 Use one credibility criterion to compare the credibility of the former Waste minister with that of WEN. [2]**

- Credit two marks for a comparison which gives an evaluation of both sides using the same criteria.
- Credit one mark for a comparison with an evaluation of one side or for an evaluation of two sides with no direct comparison, both of which refer to the same criterion.

An example that would gain two marks:

Neutrality: the former Waste minister is simply reporting a government decision as a result of an independent study which may be more unbiased than WEN which is seeking to defend a particular stance.

[AO2 2] [2x1] [2]

**TOTAL MARKS FOR SECTION B AO1 [1], AO2 [22] AO3 [1] [24 marks]**

- 7 Come to a reasoned judgement of the dispute as to how likely it is that disposable nappies are no worse for the environment than reusables.

In your answers you should refer to the individual sources within the documents.

- (a) State two precise claims that are corroborated.  
Support each of these with two references from the text.

[6]

**Corroboration**

[2x3]

Credit 1 mark for a correct but unsupported point of corroboration.

Credit 2 marks for a correct point that is accurately supported with one reference to the text.

Credit 3 marks for a correct point that is accurately supported with two references to the text.

Partial performance: Credit 2 marks for

- 2 references to the text that corroborate but have no stated point of corroboration
- 2 references to the text and the point of corroboration without any reference to sources.

Eg Both the Ecologist and the Daily Mail agree about the annual cost of disposal

[1 mark]

The Ecologist claims, '...costing the taxpayer £40 million each year to dispose of them'.

[2<sup>nd</sup> mark]

The Daily Mail claims, '...costing authorities more than £40 million a year to treat.'  
(accept the Waste Minister as claiming this.)

[3<sup>rd</sup> mark]

Other points that could be supported:

Both the Ecologist and the Daily Mail agree about the annual number of nappies thrown away – 3 billion.

Both AHPMA and Groundwork agree that there are other options than landfill for disposable nappies.

AHPMA, UK Environment Agency and former Waste minister agree that neither system is ecologically more damaging.

Both WEN and the Ecologist claim that disposables use more materials.

**(b) State two precise claims where conflict arises. Support each of these with two references from the text. [6]**

**Conflict [2x3]**

Credit 1 mark for a correct but unsupported point of conflict.

Credit 2 marks for a correct point that is accurately supported with one reference to the text.

Credit 3 marks for a correct point that is accurately supported with two references to the text.

Partial performance:

- 2 references to the text that conflict but have no stated point of conflict
- 2 references to the text and the point of conflict without any reference to sources

Eg The former Waste minister and the Ecologist disagree about the environmental impact involved. [1 mark]

The former Waste minister claims, 'Reusable nappies....still impact upon the environment' [2<sup>nd</sup> mark]

The Ecologist claims, 'but don't want to harm the environment....then use reusable nappies' [3<sup>rd</sup> mark]

Other conflicting interpretations that could be supported:

AHPMA and the Ecologist quote different figures about the percentage of household waste involved 2.4% and 4% (although this could refer to different years).

AHPMA and the Ecologist disagree about the percentage of people using disposables – 95% and 85%.

AHPMA and WEN disagree about the effectiveness of the government funded WRAP.

**(c) Identify all the individual sources within the documents on each side of the above dispute. Explain any source that does not fit easily onto either side. [4]**

**Balance of evidence [4 marks]**

Credit as follows:

A statement of what the **sides believe:** [1 mark]

Disposables are no worse for the **environment** v disposables are worse for the **environment**

Or

There is nothing to choose between the two systems in terms of **environmental impact** or they are as bad as each other in terms of environmental impact

Or reusables are better for the environment

UK Environmental Agency v WEN (credit as 1 or 2 sources i.e. 2005 and the former Waste minister 2007 WRAP Director general or APHMA accept groundwork Green Pages editor or The Ecologist

Credit three correctly placed sources [1 mark]

Or five correctly placed sources [2 mark]

An **explanation** of one source that **does not fit easily on either side:** [1 mark]

Groundwork – as its claims simply relate to the possibility of disposable nappy processing.  
The Daily Mail – as it just raises the question and does not assess the relative environmental impacts.

The Government Strategy Unit Report 2002 – as it simply is used for waste statistics.

BBC news online is neutral because it just reports the information.

Both images are neutral because they merely illustrate points in the text.

**(d) State which side, if any, has the greater weight of evidence, supporting this with numbers of sources. [2]**

**Weight of evidence [2 marks]**

Eg numerically the weight of evidence is equally balanced for and against - **that**

**disposables are no worse for the environment** [1 mark]

with three sources leading to this conclusion and three sources opposing it [1 mark]

Credit answers that reflect an alternative correct weighting relating to an alternative correct balance in question 7(c) i.e. either equal in weight or no worse for the environment.

(e) Using three different credibility criteria, assess the quality of evidence on each side of the above dispute. [6]

**Quality of evidence**

[2x3 marks]

Award 1 mark for each correct assessment, up to 3 marks for each side.

Eg the vested interest to misrepresent the truth is greater on the side claiming disposables are no worse for the environment.

AHPMA has a vested interest to promote the financial interests of the manufacturers it represents (1 mark).

v

WEN and the Ecologist have no direct financial motive to support either side (1 mark).

Partial performance – Credit up to 2 marks for answers that assess individuals rather than sides.

(f) State the judgement that results from your assessment. [1]

**Judgement** - greater likelihood that.....

[1 mark]

Award the judgement mark only if it links with the assessment given.

**TOTAL MARKS FOR SECTION C [25] AO3 [25]**



**Quality of Written Communication** Credit as follows across all answers

[5 marks]

Level	Errors in spelling punctuation and grammar	Use of specialist vocabulary	Expression	Marks
1	Errors are intrusive	Little use of specialist vocabulary	Order and expression impede understanding	[1-2]
2	Errors are occasional	Occasional use of specialist vocabulary	Points exhibit some order	[3]
3	Errors are few, if any	Specialist vocabulary used where appropriate	Well ordered and fluent	[4-5]

**PAPER TOTAL**

**AO1 [1], AO2 [43], AO3 [36]**

**[80]**

**MARK GRID FOR PAPER**

Question	Assessment objective	Marks targeted at Grade A	Marks targeted at Middle grades	Marks targeted at Grade E
<b>Section A</b>	<b>AO3 6</b>	<b>6</b>	<b>4</b>	<b>3</b>
<b>1</b>				
<b>2</b>	<b>AO2 2</b>	<b>2</b>	<b>1</b>	<b>1</b>
<b>3</b>	<b>AO2 18</b>	<b>18</b>	<b>14</b>	<b>9</b>
<b>Section B</b>	<b>AO1 1</b>	<b>1</b>	<b>1</b>	<b>0</b>
<b>4a</b>				
<b>4b</b>	<b>AO3 1</b>	<b>1</b>	<b>1</b>	<b>0</b>
<b>5</b>	<b>AO2 20</b>	<b>20</b>	<b>16</b>	<b>10</b>
<b>6</b>	<b>AO2 2</b>	<b>2</b>	<b>2</b>	<b>1</b>
<b>Section C</b>	<b>AO3 6</b>	<b>6</b>	<b>6</b>	<b>4</b>
<b>7a</b>				
<b>7b</b>	<b>AO3 6</b>	<b>6</b>	<b>6</b>	<b>4</b>
<b>7c</b>	<b>AO3 4</b>	<b>4</b>	<b>3</b>	<b>2</b>
<b>7d</b>	<b>AO3 2</b>	<b>2</b>	<b>2</b>	<b>1</b>
<b>7e</b>	<b>AO3 6</b>	<b>6</b>	<b>4</b>	<b>2</b>
<b>7f</b>	<b>AO3 1</b>	<b>1</b>	<b>1</b>	<b>0</b>
<b>QWC</b>	<b>AO3 5</b>	<b>5</b>	<b>4</b>	<b>3</b>
<b>Total marks 80</b>	<b>AO1 1</b>	<b>80</b>	<b>65</b>	<b>40</b>
	<b>AO2 42</b>			
	<b>AO3 37</b>			

# F492 Assessing and Developing Argument

## Section A – Multiple choice

1	A	AO1 [1]
2	C	AO1 [1]
3	B	AO1 [1]
4	D	AO1 [1]
5	B	AO1 [1]
6	C	AO1 [1]
7	D	AO1 [1]
8	D	AO1 [1]
9	A	AO1 [1]
10	C	AO1 [1]
11	B	AO1 [1]
12	D	AO1 [1]
13	B	AO1 [1]
14	A	AO1 [1]
15	D	AO1 [1]
16	C	AO1 [1]
17	C	AO1 [1]
18	A	AO1 [1]
19	B	AO1 [1]
20	B	AO1 [1]

1 mark for each correct answer. Total mark to be doubled.

**Total marks for Section A [40]  
AO1 [40]**

**Section B**

Where the mark scheme offers two marks it is for each accurately made relevant point. A comment that has the correct meaning, but lacks precision and/or detail would attract 1 mark. Example comments for 1 mark have been given but are for illustration only.

**21(a) Identify the main conclusion of the argument presented in the passage.**

We must (therefore) do everything possible to prevent more supermarkets being built  
AO1 [2]

Examples of 1 mark answers

We should prevent the building of new supermarkets.

0 marks No creditworthy material

**21(b) Identify the intermediate conclusion of the argument presented in the passage.**

The impact of supermarkets and supermarket expansion is negative.  
Also allow reasons 1, 4, 6 and 7 as IC but not if used in 22

AO1 [2]

Examples of 1 mark answers

The impact of supermarkets is negative.

0 marks No creditworthy material

**22 Identify FIVE reasons that are given to support the conclusion.**

**2 marks:** For each precisely identified reason or equivalent paraphrase

**1 mark:** Where individual reasons have been correctly identified but the expression is less specific or includes a minor reference to supporting evidence

**0 marks:** No credit worthy material

The reasons given to support the conclusion are:

1. (this shows that) the pricing policy of supermarkets is destroying British Agriculture
2. there is serious waste involved in transporting food from its source to the supermarket shelf
3. supermarkets are undermining recycling
4. (it is clear that) supermarkets have led to the end of product diversity.
5. the promotion of green issues by supermarkets has led to other problems
6. (This shows that) we can blame supermarkets for some of our current health problems
7. (showing that) supermarkets could be limiting educational aspirations
8. life was better before we had supermarkets
9. it would be impossible to get rid of supermarkets
10. allow the intermediate conclusion if it is **not** used in 21b.

Any five AO1 5x2 [10]

Examples of 1 mark answers:

1. supermarkets are destroying British Agriculture because they put farmers out of business.
2. there is waste involved in bringing food to the supermarket shelf.
3. the noise of breaking glass means that there are problems in supermarkets promoting being green.
4. life is better without supermarkets.

**23 What would the author need to assume about the dairy farms that have gone out of business in order to support the author's argument in paragraph 1?**

1. We would need to assume that the **majority** of the dairy farms have closed down/gone out of business because of (only because of) financial problems associated with the very low price of milk.
2. The closure of the **majority** of the dairy farms was not for any other reason than financial problems associated with the very low price of milk.
3. The **majority** of the dairy farms that closed were British dairy farms.
4. The **majority** of the dairy farms that have closed are the ones that are supplying supermarkets with milk.

Any 1 AO2 [2]

Examples for 1 mark

The dairy farms went out of business because supermarkets have driven down the price of milk.

The dairy farms are the ones that were supplying supermarkets (with milk)

Their closure was related to the low price of milk.

Answers that refer to low prices in general rather than specifically milk.

0 marks No credit worthy material

**24 Give ONE alternative explanation for the closure of the dairy farms that would counter the author's argument in paragraph 1.**

Lots of possibilities here. Credit anything reasonable that could cause a dairy farm *in general* to close.

1. Retirement of farmers
2. Foot and mouth
3. Health problems with cows
4. Reduction in the demand for milk

Any one AO3 [1]

0 marks for no credit worthy material or if the explanation would only account for a single or very few farms closing.

**25 According to the reasoning in paragraph 1, what general type of British farm is being destroyed?**

The reasoning is suggesting that the **smaller/small** farms and **less/un-**mechanised farms are the ones being destroyed. (Need both for 2 marks)

AO2 [2]

Examples for 1 mark.

Less/Un-mechanised farms.

Smaller/small farms

Reference to dairy farms only means 1 mark

0 marks No creditworthy material

**26(a) In order to support the argument in paragraph 2, where must we assume the typical family does its shopping?**

Supermarkets.

AO2 [1]

0 marks no credit worthy material

**26(b) The author supports the argument in paragraph 2 by using three pieces of evidence about the costs of transporting food. Identify ONE of these pieces of evidence.**

1. A typical family lunch is estimated to have travelled 26,234 miles.
2. Transporting food to and around the UK produces 19 million tonnes of carbon dioxide.
3. In terms of road congestion, accidents and pollution, the estimated cost is £9 billion.

Any one AO1 [1]

0 marks No creditworthy material or for just putting '26,234' miles or similar.

**26(c) How much support does the evidence in paragraph 2 give to the author's view that there is a great deal of waste involved in transporting food to a supermarket shelf? Good support/Weak support/No support (circle your answer) Explain your answer.**

**3 marks** for a detailed answer that connects well to their circled choice and clearly makes reference to the evidence in paragraph 2.

**2 marks** for a detailed answer that connects well to their circled choice or a less detailed answer that makes clear reference to the data in paragraph 2.

**1 mark** for basic comments that offer some support for their circled choice

**0 marks** for no creditworthy material

AO2 [3]

### Examples

*The key point that students need to latch onto is that figures about total mileage/volumes of CO<sub>2</sub> produced does not tell you how much is waste since the food would have to travel some distance to get to the lunch table.*

**Example of a 3 mark answer:** The figures used in the paragraph are all very large.

26,000 miles would reasonably be judged to be an excessive distance for food to have travelled and the massive amount of CO<sub>2</sub> released in the process would harm the environment. It might be expected that food would have to travel only short distances, or at worst distances that do not approach the figure given. The extra miles would easily constitute serious waste.

**Example of a 2 mark answer:** It is difficult to judge the support of the evidence because we are only told the total figures and not how much counts as waste. If food has to travel quite a long way to get to a supermarket, the amount of the journey that counts as 'waste' could be quite small. The figures might only offer limited support to the authors point.

**Example of a 1 mark answer:** The evidence does not support the authors point because it might have been food from other countries that had to travel all that way. The distance travelled/CO<sub>2</sub> released is excessive.

**Candidates who do no more than repeat the evidence must be given 0.**

**27** In paragraph 4, the author suggests that supermarkets are restricting consumers' choices of food. Using information from the passage, how would you counter this claim?

1. The fact that so many different types of apple **continue** to be grown or **are still/are grown** in this country.
2. The fact that individual farms **continue** to make (and presumably sell) so many different varieties of cheese or there are so many different varieties of cheese..
3. If so much food and fruit is now sourced from abroad, you might argue that consumers have a wider choice of product (if the varieties from abroad are different to those grown here. e.g. mangos).
4. The fact that supermarkets are selling organic food.

Any 1 AO3 [2]

Examples for 1 mark

There are lots of different apple varieties.

Farms can make 15 different varieties of cheese.

0 marks No credit worthy material

**28** Rejecting as much as 30% of organic food (paragraph 5) certainly seems a waste. What other information would we need to be sure that this evidence strongly supports the author's reasoning?

1. The amount of non-organic/normal food that is rejected on its way to the supermarket shelf is significantly less/lower than 30%.
2. That the amount of organic food rejected for being the wrong shape accounts for a significant amount/all of the 30%.
3. That a significant amount/all of of the 30% rejected was not due to reasonable concerns about quality/freshness/pests etc.
4. That a significant amount/all of the 30% rejected **was** edible or in good condition.
5. That other sellers of organic produce do not also reject 30% of their produce.
6. That the rejected food is not used for some other useful purpose.

Any one AO2 [2]

Examples for 1 mark

We need to know that we do not reject 30% of normal food.

That the supermarkets don't have good reasons for rejecting the 30%.

Candidates who ask questions in their answer can only get one.

0 marks No creditworthy material

**29 In paragraph 6, the author blames supermarkets for some of our current health problems.**

**(a) Name or describe a flaw in the reasoning behind this claim.**

It is post hoc reasoning or after the event reasoning.

(allow causal flaw or flaw in causation or correlation not cause confusion)

Students could describe this as 'assuming' (I know that this is an inappropriate use of this word, but they are very likely to use it here) that one thing caused the other because one thing followed the other.

Any one AO2 [1]

**(b) With reference to the text, explain why the author's reasoning is flawed. You must clearly show why there is a problem with the author's reasoning.**

**3 marks** for an accurate explanation of the flaw with reference to the information in the passage.

**2 marks** for an accurate explanation of the flaw without reference to the information in the passage or an attempt to explain the flaw with good reference to the passage.

**1 mark** for an attempt to explain the flaw.

**0 marks** No creditworthy material

Just because increases in heart disease followed supermarket expansion, this **is not enough to** prove that supermarket expansion **caused** this rise in heart disease. This is particularly true as there are many other factors involved in heart disease (smoking, lack of exercise, genetics) that could not reasonably be connected to supermarket expansion.

If the candidate has gone down the correlation not cause route we need to see clear indication that a causal relationship cannot be inferred from the fact that two things – heart disease and supermarket expansion - increased at the same time or in the same time frame as there could reasonably be some other factor that caused the rise in heart disease (such as lack of exercise or smoking.)

AO2 [3]

**Candidates who just disagree with the author by stating that there could be other factors should only get 1 mark.**

**Descriptions of the text/flaw should get 0.**

**30 Identify a possible contradiction in document 1.**

The author states that supermarkets are undermining recycling but then states that they have recycling bins in car parks/promote green issues.

The question asks for identification so we do not need any explanation.

The author claims that supermarkets have led to the end of product diversity but evidence that we import a range of fruit from abroad would contradict this.

AO2 [2]

Examples for 1 mark

I'm not sure that it is contradictory to say that Supermarkets are destroying British agriculture and then to talk about the variety of cheese and fruit but we could allow these for one mark.

0 marks No creditworthy material

Questions based on 'Corner shop convenience'

- 31 By considering the purpose of the All-Party Small Shops group, explain why we might question their claim that the/corner shop will be history by 2015'.**

Given that this group of MP's represents the interests of small shops we might imagine that they would have an interest in exaggerating or representing the situation in a way to favour the needs of small shops.

(Candidates could clearly describe this as a bias or vested interest, but they must explain why to get both marks.)

AO2 [2]

Example for 1 mark:

The MP's purpose is to support small shops

The MPs might be biased or have a vested interest.

0 marks No creditworthy material

- 32 In order to support the reasoning in paragraph 1 relating to the disappearance of the corner shop, give two assumptions that must be made about the 2,000 independent shops that close each year.**

1. We would need to assume that the reason/explanation for the closure of the majority/significant majority of the 2000 independent (or small) shops was due to or was related to supermarkets.
2. That the majority/significant majority of the 2000 independent shops that close each year are corner shops.
3. That the majority/significant majority of the 2000 independent shops that close each year used to sell products that could be found at a supermarket – e.g. food and housewares.
4. That the majority/significant majority of the 2000 independent shops that closed each year were not replaced by new shops in the same area.
5. That the closure of 2000 independent shops each year will continue into the future at a similar level (or until 2015).
6. That the majority/significant majority of the 2000 independent shops that close are in areas where new supermarkets have been built/are planned.
7. The majority/significant majority of independent shops closed due to customers preferring to shop in supermarkets.
8. The majority/significant majority of the independent shops closed due to being unable to match supermarket prices.

Any two AO2 [2+2]

Examples for 1 mark:

1. Supermarkets caused the shops to close.
2. Independent shops equals corner shops.
3. Independent shops will continue to close.
4. New shops haven't opened.
5. The shops closed because customers preferred supermarkets



**33 Identify the general principle used by the author in paragraph 1.**

1. We should be protecting the local community
2. We should be protecting things of great worth.

AO1 [2]

Example for 1 mark

1. We should look after the local community. (a mis-quoting)
2. The local community is a thing of great worth that we should be protecting. (i.e. the reason and the principle.)
3. We should be protecting the local community from damage (principle and example.)

**34 In paragraph 1, the author dismisses the arguments of supermarket bosses by suggesting that they are selfish and greedy.****(a) Name or describe a flaw in this reasoning.**

This is an ad hominem or attack on the person or attacking the person rather than their argument.

(Accept anything that looks like ad hominem: eg ab homenum)

Any one AO2 [1]

**(b) With reference to the text, explain why the author's reasoning is flawed. You must clearly show why there is a problem with the author's reasoning.**

**3 marks** for an accurate explanation of the flaw with reference to the information in the passage.

**2 marks** for an accurate explanation of the flaw without reference to the information in the passage or an attempt to explain the flaw with good reference to the passage.

**1 mark** for an attempt to explain the flaw.

**0 marks** No creditworthy material

The flaw comes about because the author attacks the supermarkets bosses' characters, suggesting that they are selfish and greedy, rather than addressing their argument that supermarket expansion would create new jobs. (need to see reference to selfish and greedy and creating more jobs for the 3 marks)

AO2 [3]

**Candidates should not receive credit for answers that merely disagree with the author.**

- 35 In paragraph 2, the author likens the closure of corner shops to the closure of coal mines. By considering the similarity or dissimilarity of the ideas presented, evaluate the effectiveness of the reasoning presented in this paragraph.**

You should make two separate points.

The author is arguing that the closure of corner shops should be fought on the basis that the closure of the coal mines is now regretted. The question does not ask about analogies in order to give students more freedom of response. However, many students will spot this and may use 'analogy' in their answer. Here are some points that they might make.

**The reasoning is effective**

1. The situations are similar in that many people believe that we do not need corner shops as there is a better/cheaper alternative (supermarkets) just as it was thought that there were better/cheaper alternatives to coal.
2. The situations are similar in that both closures led to less choice.
3. The situations are similar in that in both cases closure has led to a reliance on one source of fuel or food.
4. The situations are similar in that you could argue that we would be reliant on a source that does not benefit the country – foreign fuels and foreign supermarkets.
5. The situations are similar in that it was argued that cost was responsible for the closure – gas is cheaper as are supermarkets.
6. In both cases there have been significant arguments against closure and widespread public support – they both benefit from considerable public support.

**The reasoning is not effective.**

1. The situations are dissimilar in that it would clearly (due to technical problems/need for a skilled work force etc) be far easier to re-open a corner shop than a coal mine.
2. The situations are dissimilar in that closure of coal mines left us reliant on gas whereas closure of corner shops still leaves many other options even within the category 'supermarket'.
3. The situations are different in that reliance of foreign fuels is unlikely to be seen as a good thing whereas many people clearly prefer to shop in supermarkets.
4. The two situations are markedly different in terms of the impact on the consumer (which the author argues about). The closure of coal mines had little immediate impact on the consumer as coal was still available, whereas the closure of a local shop will have an immediate effect on the consumers in that area. Thus, the author uses a poor analogy given that the idea does not support their point of a negative impact on consumers.

Any two AO2 [2+2]

1 mark answers will lack the precision and detail of the above

1. In both cases we can get the product somewhere else.
2. In both cases the public are against the closure.
3. Shops open and close all the time but coal mines do not.
4. Similar in that both were decisions taken in the present without looking into the future.

0 marks No creditworthy material

**Total marks for Section B [50]**  
**AO1 [17]**  
**AO2 [28]**  
**AO3 [5]**

## Section C

- 36 Supermarkets would want to respond to the points in paragraph 3 by showing that the use of packaging is essential. Write a very short argument consisting of two reasons and a conclusion to support this view.**

Award **2 marks** for each identified reason, accurately stated, that supports the conclusion.

AO3 [2+2]

Award **1 mark** for a more muddled reason that offers weak support to the conclusion.  
Award **0 marks** for an irrelevant reason or no creditworthy material

Award **1 mark** for the correct conclusion which must be of the form:  
(Therefore,) (the use of) packaging (for supermarket foods/products) is essential.

AO3 [1]

Award **0 marks** for an answer that is not in the form of conclusion or is nothing like the stated conclusion.

Examples of possible reasons for 2 marks.

1. Packaging is needed to maintain the freshness of food/stop it deteriorating/less wasted food.
2. Packaging is needed in order to maintain hygiene standards.
3. Packaging is needed to protect the food against physical damage in transit/less wasted food.
4. Packaging is needed to allow more products to be fitted into each lorry load – easier to stack boxes than loose food – creating an environmental benefit.
5. Packaging is needed in order to provide customers with important dietary/nutritional information.

Examples of reasons for 1 mark

Customers don't want to buy damaged food.

Food needs to be hygienic

### Performance description for questions 37 and 38

#### Performance descriptions for 7-10 marks:

Candidates present their own relevant further argument with a clear structure that includes at least two reasons supporting an intermediate conclusion. The argument is coherent and relies only on one or two reasonable assumptions. The argument will also contain a further reason or reasons/examples/evidence/counter-examples that support the argument. The final conclusion is precisely stated.

#### Performance description for 4-6 marks:

Candidates present an argument that contains several reasons and there is an attempt to form an intermediate conclusion. The argument may be coherent but relies more heavily on assumptions so that the link between reasons and conclusion is less clear. The argument may contain an example/evidence that has less relevance to the overall argument. The main conclusion is clearly stated.

#### Performance description for 1-3 marks:

Candidates present an argument that contains one or more reasons of limited relevance to the main conclusion. There is no intermediate conclusion. The argument is unlikely to be coherent without including several unreasonable assumptions. The use of evidence or examples is very limited. Conclusions are imprecise and unclear.

- 37 At the end of paragraph 6, the author suggests that supermarkets might be limiting educational aspirations. Construct an argument to COUNTER this by showing that working in supermarkets could support educational ambitions.

There are several possible approaches here:

Issues of cost around university and the need to save money for future studies.

Life experience that will encourage students to make more of their studies.

Experience that motivates them to avoid dead-end jobs.

Career opportunities within supermarkets/management training etc.

Develop the social skills that are needed for future employment – part of life long learning

AO3 [10]

- 38 Construct one further argument that CHALLENGES or SUPPORTS the main conclusion of 'The supermarket bill' (Document 1).

**For the conclusion: We must therefore do everything possible to prevent more supermarkets being built.**

Arguments based on supermarkets control of other sectors – clothing/discount electricals etc

Supermarkets employ lots of part-time staff which might form the basis of an argument about their working practices.

Out of town sites encourage car use and increase pollution/discriminate against those without cars

Appalling architecture and destruction of environmentally sensitive areas.

**Against the conclusion: We can allow more supermarkets being built or we don't need to prevent supermarkets being built or we don't need to do very much to prevent more supermarkets being built or we mustn't do everything possible to prevent more supermarkets being built.**

Convenience and ease/time saving for busy families

Positive aspects of the driving down of prices/advantages for families.

Job opportunities and economic arguments – these are some of the UK's biggest companies and must contribute a considerable amount of money to the countries economy.

You could argue that supermarkets are in the fore front of a healthy eating revolution (we might not agree, but you could!) with their ranges of low fat foods and championing of organic foods.

**N.B. A candidate who gets the conclusion wrong in Q21 is *not* to be penalised twice. Mark question 40 on the basis of the conclusion given in Q21 – how well does the argument given in 40 support the conclusion given in 21?**

AO3 [10]

**Total marks for section C [25]**

AO3 [25]

**Quality of Written Communication**

Credit, where written communication is found, as follows across Section B and C answers

	<b>Errors in punctuation and grammar</b>	<b>Use of specialist vocabulary</b>	<b>Expression</b>	<b>Marks</b>
Level 1	Errors are intrusive	Little use of specialist vocabulary	Points tersely expressed	1 – 2
Level 2	Errors are occasional	Occasional use of specialist vocabulary	Points exhibit some order	3
Level 3	Errors are few, if any	Specialist vocabulary used where appropriate	Well ordered and fluent	4 – 5

**Section A total marks [40]**

**Section B total marks [50]**

**Section C total marks [25]**

**Quality of written communication [5]**

**Paper total [120]**

## Assessment objectives breakdown

Question	AO1	AO2	AO3	Total
<b>Section A</b>				
1 - 20	40			40
<b>Section B</b>				
21a	2			2
21b	2			2
22	10			10
23		2		2
24			1	1
25		2		2
26a		1		1
26b	1			1
26c		3		3
27			2	2
28		2		2
29a		1		1
29b		3		3
30		2		2
31		2		2
32		4		4
33	2			2
34a		1		1
34b		3		3
35			4	4
<b>Total for section B</b>	<b>15</b>	<b>28</b>	<b>7</b>	<b>50</b>
<b>Section C</b>				
37			5	5
38			10	10
39			10	10
<b>Total for section C</b>			<b>25</b>	<b>25</b>
Quality of written communication			5	5
<b>Total</b>	<b>55</b>	<b>28</b>	<b>37</b>	<b>120</b>
%	46	23	31	100

## Specification coverage grid

Question/specification reference	5.2.1	5.2.2	5.2.3	5.2.4	5.2.6	5.2.7	5.2.8
21a	X						
21b	X						
22	X						
23	X						
24							X
25		X					
26a	X						
26b				X			
26c					X	X	
27							X
28					X		
29a					X		
29b					X		
30			X				
31					X		
32	X						
33				X			
34a					X		
34b					X		
35				X	X		
36							X
37							X
38							X

# F493 Resolution of Dilemmas

## Preamble

The Unit 3 paper sets out to assess candidates' critical thinking skills in the context of decision-making. To be successful, in general terms candidates need to be able to demonstrate the ability to handle key terms and concepts such as choice, criteria and dilemma and to come to judgments in the context of situations determined by a set of resources. The term "dilemma" is to be understood here in a broad sense as **a situation where a choice must be made between mutually exclusive options, each of which will result in undesirable consequences as well as benefits**. This will include a consideration of the consequences of doing X and not doing Y.

## Assessment Objectives [AOs] and Allocation of Marks

The total mark for the paper is 80, allocated as follows:

- AO1      **Analysis** of the use of different kinds of reasoning      **[8 marks]**
- AO2      **Evaluation** of different kinds of reasoning      **[26 marks]**
- AO3      **Communication** of developed arguments      **[46 marks]**

This weighting is reflected in the different types of questions asked and in the application of the markscheme.

Question 1	AO1	4	AO2	4	AO3	2	Total	10
Question 2	AO1	2			AO3	4	Total	6
Question 3			AO2	12	AO3	12	Total	24
Question 4(a)			AO2	2	AO3	2	Total	4
Question 4(b)	AO1	2	AO2	8	AO3	26	Total	36
		8		26		46		80

## Guidelines for Annotating Scripts

All markers will be required to use the following conventions. No annotation will be used except what is agreed at the Standardization meeting.

Mark in **right** margin of answer booklets, as follows. No other annotations to be made in the right margin.

- 1      two numbers between 0 and 5  
total for question 1 ringed and transferred to cover.
- 2      three numbers between 0 and 2  
total for question 2 ringed and transferred to cover.
- 3      number between 0 and 24 (calculated from levels) ringed and transferred to cover.
- 4(a)   number between 0 and 4.
- 4(b)   number between 0 and 36 (calculated from levels).  
total for question 4 ringed and transferred to cover.

At the end of question 3, state three levels. At the end of question 4b, state four levels.

The following annotations may be made in the **left** margin in questions 3 and 4b:

<b>D</b>	Reference to Document	<b>P</b>	Use of principle
<b>E</b>	Evaluation	<b>Q</b>	Quality of argument
<b>ED</b>	Evaluation of Document	<b>R</b>	Resolution of dilemma

Salient points may be underlined and contributory marks may be written in the body of the script.



**Question 1****[10 marks]** [AO1 = 4; AO2 =4 ; AO3 = 2]

**With reference to Documents 1 and 2, identify and briefly explain two of the problems that might arise in using Documents 1 and 2 in assessing the extent to which animal testing can be considered necessary.** [10]

For each of two points:

- [5 marks] for identifying a relevant problem, referring to the Document and giving a developed explanation.
- [4 marks] for identifying a relevant problem and **either** referring to the Document and giving an undeveloped or vague explanation **or** giving a developed explanation without reference to the Document.
- [3 marks] for identifying a relevant problem and **either** referring to the Document **or** giving an undeveloped or vague explanation.
- [2 marks] for identifying a relevant problem.
- [1 mark] for identifying a vague or barely relevant problem.
- [0 marks] for nothing creditable.

**[5+5]****Indicative content**

Each of the documents provides only a one-sided view. [This should be credited as **one** point, unless it is developed separately for both documents.]

Document 1 refers to only one type of animal testing, which may not be typical of testing procedures as a whole. It is not clear whether the BUAV disapproves of non-harmful experimentation or not.

The evidence used in Document 1 may be selective.

Document 2 refers to biomedical testing only.

Document 2 does not produce evidence to support its claim that it is rarely possible to substitute non-animal testing.

It is assumed, without being argued, that it is more necessary to alleviate human than animal suffering.

Since the debate is highly technical, it can be difficult for non-specialists to form a view.

**Examples of 5-mark answers**

The evidence cited in Document 1 is selective. The document refers to skin irritation and carcinogenicity as “just two of many examples”, but the author has probably chosen those examples because they include significant differences between animals and humans. Other differences might be less marked.

Document 2 claims that “it is rarely possible to substitute” computer modelling for animal studies and vice versa, but the document gives no evidence or examples to prove or illustrate that claim. The author’s response to the counter-claim that “information can be obtained by alternative methods, such as test tubes and computers” is simply to deny it.

[Other valid answers should be accepted.]

**Question 2****[6 marks]** [AO1 = 2; AO3 = 4]

**With reference to Document 3, identify and briefly explain three factors that might affect how people react to animal testing. [6]**

For each of three points:

2 marks for identification + clear explanation of a relevant factor

1 mark for identification of a relevant factor

0 for nothing creditable

**[2+2+2]****Indicative content**

Factors might include:

- The types of animal used in procedures
- Total numbers of animals used
- The reason for testing [NB, the procedures listed as being performed for “Breeding” were to produce animals for experimentation, **not** as research into reproduction.]
- The nature of the procedures: 60% without any form of anaesthesia
- Historical trends: the marked fall in procedures followed by a rise in recent years.

**Examples of 2-mark answers**

People might be more likely to favour experimentation because the animals are anaesthetized in 40% of experiments, on the basis that this reduces the suffering involved.

People might be more likely to favour experimentation because most experiments are performed on rodents, which are a fairly low order of animal, and very few if any are performed on apes, which resemble humans more closely.

[Other valid answers derived from Document 3 should be credited. Explicit reference to Document 3 is **not** required for 2 marks, but points which **cannot** be derived from that Document should not be credited.]

**Question 3****[24 Marks]** [AO2 = 12; AO3 = 12]

Select **two** of the criteria given in the Criteria box and apply each of them to **two** of the choices given in the Choices box. In your answer, you should:

- Assess how far each of the two criteria selected might help in making decisions about animal testing;
- Evaluate the relevance and importance of each criterion as applied to animal testing;
- Critically assess the relevant material in the Resource Booklet.

Mark by levels, according to the following table.

Level	Application and evaluation of selected criteria to choices AO2+AO3	Use and critical assessment of evidence in the Resource Booklet AO2	Communication and development of argument AO3
<b>L4: 19-24</b>	<ul style="list-style-type: none"> <li>• Sound and perceptive application of two criteria to two of the listed choices.</li> <li>• Firm understanding of how criteria might support <b>and</b> weaken the case for the selected choices.</li> </ul>	<ul style="list-style-type: none"> <li>• Perceptive, relevant and accurate use of resource material.</li> <li>• Sustained and confident evaluation of resource material.</li> </ul>	<ul style="list-style-type: none"> <li>• Cogent and convincing reasoning, very well structured to express/ evaluate complex ideas/ materials.</li> <li>• Few, if any, errors of spelling, grammar, punctuation.</li> </ul>
<b>L3: 13-18</b>	<ul style="list-style-type: none"> <li>• Clear understanding of how two criteria might support <b>and</b> weaken the case for two of the listed choices.</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant and accurate use of resource material.</li> <li>• At least some evaluation of resource material.</li> </ul>	<ul style="list-style-type: none"> <li>• Effective and persuasive reasoning.</li> <li>• Some clarity in expression of complex ideas.</li> <li>• Relatively few errors of spelling, grammar, punctuation.</li> </ul>
<b>L2: 7-12</b>	<ul style="list-style-type: none"> <li>• Basic understanding of how two criteria might support <b>and/or</b> weaken support for two of the listed choices</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant and accurate use of resource material.</li> </ul>	<ul style="list-style-type: none"> <li>• Basic presentation of reasoning, including relevant points and conclusion(s).</li> <li>• Written communication fit for purpose, but containing significant errors of spelling, grammar, punctuation.</li> </ul>
<b>L1: 1-6</b>	<ul style="list-style-type: none"> <li>• At least one criterion applied to at least one choice or to the issue in a limited/ simplistic manner.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited, perhaps implicit, use of resource material.</li> </ul>	<ul style="list-style-type: none"> <li>• Reasoning is sketchy and unstructured.</li> <li>• Communication may lack coherence and contain significant errors in spelling, punctuation and grammar.</li> </ul>
<b>L0 0</b>	<ul style="list-style-type: none"> <li>• No application of criteria to issue.</li> </ul>	<ul style="list-style-type: none"> <li>• No use of resource material</li> </ul>	<ul style="list-style-type: none"> <li>• No discernible reasoning</li> </ul>

Maximum level 2 for “Use and critical assessment of evidence in the Resource Booklet” if sources are used uncritically.

Answers which fulfil all three descriptors of a level will receive a mark at the top of that level, while answers which satisfy only one or two of the descriptors will receive a correspondingly lower mark.

Although the question intends candidates to evaluate the same two choices by the same two criteria, they should not be penalised for assessing different choices by different criteria, except insofar as they penalise themselves because their writing will be less economical.

### Indicative content

Candidates who discuss the option of allowing animal testing to continue as at present should make use of facts from Document 3 to inform their claims.

Good answers which discuss the option of restricting animal testing to serious medical issues are likely to point out that most important medical discoveries are found serendipitously during the course of “pure” research, and that most projects of pure scientific research are portrayed as having possible medical benefits (with a lack of emphasis on “possible”); they may discuss whether the project described in Doc 4 would or should qualify.

Allowing animal testing to continue as it is at present would go some way towards meeting the criterion of the welfare of animals, as implicitly revealed in Document 3 (use of anaesthesia, use of lower mammals when possible, reduction in numbers of procedures since 1970). The requirement to apply for licences, as illustrated in Doc 4, also shows that animal welfare is a concern. Good answers will point out that although this is the least favourable of the options in relation to this criterion, that is only because more extreme options have not been mentioned. Strengthening the regulation of animal testing could improve the welfare of animals to some extent, provided the criteria were sufficiently rigorous; good answers would make some suggestions. The option of restricting animal testing to serious medical issues would reduce the number of procedures and thereby contribute to the welfare of animals. The option of banning all animal testing appears to satisfy the criterion of the welfare of animals, although very perceptive candidates might point out that this option is slightly too rigorous, since some testing – such as preferences of pet food and some (not all) psychological research – does not harm the animals involved. Some candidates may know that at least the higher animals which are used in research are treated kindly in other respects.

Allowing animal testing to continue as at present meets the criterion of medical benefits, although arguably an even more permissive framework might meet it even more fully. Strengthening the regulation of animal testing might limit medical benefits slightly, but is unlikely to reduce them significantly. Candidates are likely to claim that the option of restricting animal testing to serious medical issues would fully satisfy the criterion of medical benefits, but better candidates will point out that many medical benefits derive from pure scientific research. The option of banning all animal testing appears to fall foul of the criterion of medical benefits, but good candidates might explore the implications of the fact that research institutions would probably move to another country if their activities were being restricted in one jurisdiction.

Allowing animal testing to continue as at present probably meets the criterion of cost effectiveness, since none of the documents suggests that the restrictions prevent cost-effective research; however, it would be cheaper not to use anaesthetics. Strengthening the regulation of research would have cost implications, in relation to both enforcement and use of alternatives: good answers will give examples. Restricting animal testing to serious medical issues would be relatively cost-effective to the companies, since the expenditure on research would be recouped by profits on the sale of drugs, but there may be limits on the number and cost of new medical treatments which a country can afford. Computer modelling is likely to be more cost-effective whenever it can be used instead of experiments on animals.

Allowing animal testing to continue as at present probably meets the criterion of scientific value: at least, none of the documents suggests that anyone is being prevented from making an important scientific discovery because they have been refused a licence to experiment on animals. Strengthening regulation may prevent researchers from doing a few things and may thereby compromise scientific value to some extent, but it is unlikely to be a big problem. Restricting research to serious medical issues would rule out most “fundamental biological research”, except insofar as such projects could be represented as having probable medical applications. The option of banning all animal testing would seriously fail to satisfy this criterion, but the availability of computer modelling and other modern techniques means that the loss would not be as devastating as it would have been in previous generations. Good candidates might explore the implications of the fact that research institutions would probably move to another country if their activities were being restricted in one jurisdiction.

*Evaluation of Resource Documents: Indicative Content for Use in Questions 3 and 4b*

Documents 1 and 2 derive from pressure groups at opposite sides of the debate. Both have clear vested interest to select and present the evidence in such a way as to support their own position. Both presentations are biased in favour of their own side of the debate. Both groups have reputations for being responsible but committed to one side of the debate, and the documents bear that out. Both groups have expertise in the topic and access to (ability to see) reliable statistics, but the RDS – being on the inside of the research community – is probably even more reliable than the BUAV in these respects.

Document 3 is derived from an official Government publication. It has good reputation, expertise and ability to see. Although many Government publications have some kind of vested interest, this appears not to, except insofar as it is on the side of the scientific establishment. The document can be described as neutral, since it simply presents statistics, without drawing any conclusions from them.

Document 4 is also derived from a Government publication, but the content was presumably derived from a research proposal produced by the people wanting to undertake the research. So it has a vested interest to emphasize the possible benefits of the research. Although the document is biased in favour of the application, it does not conceal the fact that the proposed research is highly speculative. The Home Office, which published the report, has a good reputation, but it is not known what kind of reputation the researchers have; presumably they have expertise in the subject area.

**Question 4 (a)****[4 marks]** [AO2 = 2; AO3 = 2]**(a) State and explain one dilemma that arises in making decisions about animal testing.**  
**[4]**

In this examination, a dilemma is understood as a situation where a choice must be made between mutually exclusive options, each of which will result in undesirable consequences as well as benefits.

- [4 marks] clearly and convincingly identifies both sides of a relevant dilemma and briefly identifies the undesirable consequences of each alternative.
- [3 marks] identifies a relevant dilemma and briefly identifies the undesirable consequences of each alternative.  
**or** identifies benefits/disadvantages of alternative responses to a dilemma without explicitly identifying the dilemma.
- [2 marks] identifies a relevant issue/problem expressed as a choice  
**or** identifies benefits/disadvantages of alternative options without focussing on a particular dilemma.
- [1 mark] identifies an issue/problem connected to the topic but fails to express it as a dilemma.
- [0] Nothing creditable

**Indicative Content**

The most likely dilemma to be identified is:

Should the Government prohibit animal testing, even though it will hold back the development of medicines and expose users of certain products to danger, or should they continue to permit it, even though it will cause suffering to animals?

[Other acceptable dilemmas should be credited.]

**Question 4 (b)****[36 marks]** [AO1 = 2; AO2 = 8; AO3 = 26]

**(b) Write an argument that attempts to resolve this dilemma. In your argument you should:**

- identify some relevant principles (these may be ethical principles);
- assess the extent to which these principles are helpful in terms of resolving the dilemma;
- use the evidence in the Resource booklet to support your argument where relevant.

**[36]**

Mark by levels, according to the following table.

Principles

General principles have implications that go beyond the case in point. Different kinds of principle a candidate can refer to might include legal rules, business or working practices, human rights, racial equality, gender equality, liberty, moral guidelines.

Candidates may respond to the dilemma by explaining and applying relevant ethical theories. This is perfectly acceptable, provided the result is not merely an exposition of ethical theories with little or no real application to the problem in hand. Candidates are not required to identify standard authorities such as Bentham or Kant, or even necessarily to use terms such as Utilitarianism etc. Candidates who deploy a more specific knowledge of ethical theories will be credited only for applying identified principles to the dilemma in order to produce a reasoned argument that attempts to resolve it. The specification for this Unit does, however, provide examples of principles/ethical theories/values that could be applied to any dilemma, including need, desert, right, deontology, egalitarianism, consequentialism, elitism, prudentialism, egoism, altruism, hedonism, but not all of these could convincingly be applied to this particular issue.

Level	Treatment of a relevant dilemma AO3	Identification, explanation and application of relevant principles AO3	Use of resource material AO1 + AO2	Quality of argument AO3
<b>L4:</b> <b>28-36</b>	<ul style="list-style-type: none"> <li>• Confidently-expressed resolution of a clearly-focused dilemma.</li> <li>• Perhaps an awareness that the resolution is partial/provisional.               <ul style="list-style-type: none"> <li>• Clear and valid judgments made in coming to an attempted resolution.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Skilful and cogent treatment and application of at least 3 principles or at least 2 major ethical theories.</li> <li>• Clear and purposeful exposition of how the principles might be more or less useful in resolving the dilemma.</li> </ul>	<ul style="list-style-type: none"> <li>• Perceptive, relevant and accurate use of resource material.</li> <li>• Sustained and confident evaluation of resource material.</li> </ul>	<ul style="list-style-type: none"> <li>• Cogent and convincing reasoning.</li> <li>• Well-developed suppositional reasoning.</li> <li>• Communication very well suited to handling complex ideas.               <ul style="list-style-type: none"> <li>• Meaning clear throughout.</li> </ul> </li> <li>• Frequent very effective use of appropriate terminology.</li> <li>• Few, if any, errors in spelling, grammar and punctuation.</li> </ul>
<b>L3:</b> <b>19-27</b>	<ul style="list-style-type: none"> <li>• Generally confident and developed treatment of a sufficiently focused dilemma.</li> <li>• Clear indication of an attempt to resolve the dilemma, perhaps concluding that it cannot be resolved.</li> </ul>	<ul style="list-style-type: none"> <li>• At least 2 relevant principles accurately identified, explained and applied.</li> <li>• Clear exposition of how the principles might be more or less useful in resolving the dilemma.</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant and accurate use of resource material.</li> <li>• Some evaluation of resource material.</li> </ul>	<ul style="list-style-type: none"> <li>• Effective and persuasive reasoning.</li> <li>• Some suppositional reasoning.               <ul style="list-style-type: none"> <li>• Clear and accurate communication.</li> </ul> </li> <li>• Frequent effective use of appropriate terminology.</li> <li>• Few errors in spelling, grammar and punctuation.</li> </ul>
<b>L2:</b> <b>10-18</b>	<ul style="list-style-type: none"> <li>• At least a basic understanding that a dilemma involves making difficult decisions involving unfavourable consequences whatever is decided <b>or</b> a basic discussion of the issue not expressed as a dilemma.</li> </ul>	<ul style="list-style-type: none"> <li>• At least 2 relevant principles identified <b>or</b> a well-developed discussion of 1 principle.</li> <li>• Basic application of principles to the dilemma/ issue.</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant and accurate use of resource material.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited ability to combine different points of view in reasoning.</li> <li>• Perhaps some suppositional reasoning.</li> <li>• Some effective communication.               <ul style="list-style-type: none"> <li>• Some use of appropriate terminology.</li> </ul> </li> <li>• Fair standard of spelling, grammar, punctuation, but may include errors.</li> </ul>



<b>L1: 1-9</b>	<ul style="list-style-type: none"> <li>• Limited discussion of the issue.</li> <li>• Little or no awareness of what is meant by a dilemma.</li> </ul>	<ul style="list-style-type: none"> <li>• Some attempt to identify at least one principle and to apply it to the dilemma/issue.</li> </ul>	<ul style="list-style-type: none"> <li>• Very limited, perhaps implicit, use of resource material.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited ability to produce coherent reasoning.</li> <li>• Little evidence of effective use of specialist terminology.</li> <li>• May contain significant errors in spelling, punctuation and grammar.</li> </ul>
<b>L0 0</b>	<ul style="list-style-type: none"> <li>• No discussion of the issue</li> </ul>	<ul style="list-style-type: none"> <li>• No use of principles</li> </ul>	<ul style="list-style-type: none"> <li>• No use of resource material</li> </ul>	<ul style="list-style-type: none"> <li>• No discernible reasoning</li> </ul>

Maximum of L2 for “Use of Resource Material” for answers which use resources uncritically.

Answers which fulfil all four descriptors of a level will receive a mark at the top of that level, while answers which satisfy fewer of the descriptors will receive a correspondingly lower mark.

Indicative Content

Credit must be given to any argument based on a principle in the sense outlined in the preceding notes. Principles of that kind in relation to this issue are likely to consist of, or be based on, judgments about the moral status of animals, eg:

- Animals have equal moral standing with humans;
- Animals have a lower moral standing than humans, but are not morally negligible.
- Animals have no moral standing and humans can therefore treat them as they like;
- Humans may kill animals if necessary to save their own lives but not for lesser reasons;
- Humans may kill animals but must not cause them gratuitous suffering.

*The best answers are likely to appeal to two or three of the following ethical principles and theories, which are susceptible of fuller development.*

Probably the most likely principle to which appeal may be made is the Utilitarian slogan, “[we should aim to produce] the greatest good of the greatest number”. Bentham himself included animals within the moral community, on the principle,

The question is not, Can they reason? nor, Can they talk? but, Can they suffer? Why should the law refuse its protection to any sensitive being?

Peter Singer argues on a similar basis that animals should be brought within the “expanding circle”, and he accuses those who discriminate against animals of “speciesism”. Mill’s version of Utilitarianism is slightly different: because he included quality of happiness as well as quantity, he claimed that the pleasure or pain of humans is intrinsically more important than those of animals. Overall, Utilitarianism is the only moral theory which really takes animal welfare seriously.

Dilemmas relating to this subject can also be expressed as a conflict of rights. Candidates may set the human right to health care or to self-defence against danger over against animals’ right to life or to freedom from gratuitous suffering.

Kant’s Categorical Imperative is not a particularly fruitful approach to this subject, since Kant himself considered that the only duty which persons have towards animals is an indirect one (inasmuch as we may be likely to treat persons in the way that we treat animals). The first version, “Act according to that maxim which you can will to be a universal law” could conceivably be used on either side of the debate, although Kant himself did not do so. The second version, that we should always treat persons as ends, and not as means only, specifically excludes other species.

The content of any appeal to Divine Command ethics would vary according to which religion such commands were drawn from, but both Jews and Christians might be influenced by the principle from the Old Testament/Jewish Bible that God has set humans as stewards (managers) of the environment, including all other species (Genesis 1:26-28). The use of the word “dominion” in the Authorized Version translation of Genesis 1:26-28 led previous generations of biblical interpreters to claim that humans could use animals however they liked.

Candidates who appeal to Natural Law in relation to this subject are likely to argue that humans have a higher moral standing than animals but the treatment of animals is a moral issue.

Theories of Social Contract do not have any obvious bearing on this issue. Any attempt to apply Rawls’s theory to animal testing, on the grounds that the Original Position and the Veil of Ignorance include ignorance of what species one belongs to, should be credited, even though such an argument would probably not withstand serious scrutiny.

# F494 Critical Reasoning

## UNIT 4 CRITICAL REASONING June 07 Mark Scheme

### Section B

#### Coverage of Assessment Objectives

AO1 – analysis of reasoning:	17
AO2 – evaluation of reasoning:	30
AO3 – development of reasoning:	18
Quality of Language	5

*In all cases performance descriptors refer to candidates performing at the top of the band. Any candidate performing above the descriptor enters the bottom of the next band.*

*Annotations.*

*The marks for each part of a question should be written in the margin.*

*The marks for a whole question should be written in the margin and circled.*

*Where levels of response descriptors are used, the level should be written in the margin by the mark, e.g. Q25, L4, 17.*

*Ticks should be avoided, especially where they do not add up to the number of marks given.*

#### **Analysis Questions**

*It is helpful to put the following abbreviations in the left hand margin:*

*R where reason is precisely and accurately identified.*

*IC where intermediate conclusion is precisely and accurately identified.*

*Ev where evidence is precisely and accurately identified.*

*Ex where example is precisely and accurately identified.*

*CA where counter claim or counter argument is precisely and accurately identified.*

*St where accurate indication of structure is given.*

*G where gist is given.*

*I'm not sure this is essential. I think it might help to see at a glance. If we do annotate, it should match what we do in Development of Reasoning questions.*

#### **Evaluation Questions:**

*In evaluation questions, it is helpful to put the following abbreviations in the left hand margin:*

*S where strength is identified*

*W where weakness is identified*

*E where evaluative comment is made*

*I where the impact of strength or weakness is considered.*

**Development of Reasoning Questions:**

- R Reason  
 SR Strand of Reasoning  
 A Argument depends on (glaring) assumption  
 IC Intermediate Conclusion  
 Ex Example  
 Ev Evidence  
 CC Counter claim presented  
 CA Counter argument presented  
 RCA Response to counter argument or counter claim.  
 P Use of argument based on principle  
 Ag Use of argument based on analogy  
 HR Use of Hypothetical Reasoning

Analysis of the outline structure of the argument

- R1 Evidence indicates that brilliance ... is due only in very small part to innate ability.
- R2 Whatever the discipline, there is no guarantee that a brilliant child will make a brilliant adult.
- R3 What is rarely mentioned about child prodigies is the hard work and support.
- ? R4 (notion that people love doing things etc ..)
- IC1 Trouble is, the thinking is wrong. (I think we have to interpret this as the thinking about education is wrong because the thinking about genius is wrong.)
- So, given the right environment we can all come closer to greatness.
- And
- R5 If the aim is to ... it doesn't work
- R6 Creating elite schools sends the wrong message to ...
- R7 This form of streaming can be disruptive for brilliant children as well.
- (IC So the thinking (about education) is wrong)
- C So, when it comes to creating an environment in which they [children] can fulfil their potential, it seems that we're getting it wrong.

so we need to change education to give each individual the best chance of coming close to greatness, not just the brightest children.

(Conclusion which can be drawn from the passage – not stated but clearly where the passage is going.)

**Multi-choice mark scheme**

	Name	Skill	Key
1	Computer games	Function of element	D
2	Computer games	Function of element	C
3	Argument?	Identify Argument	D
4	Vertical Jump Scores	Impact of Additional Evidence	A
5	Animal Emotions	Assumption	C
6	Male teachers	Draw conclusions	A
7	Male teachers	Explain why not accurate	C
8	Doddy the cat	Pattern of reasoning	A
9	Music and learning	Problem with statistics	B
10	Music and learning	Strengthen / weaken	A
11	Six of us from Tauntons	Venn diagram	B
12	Skinny models	Analogy	C
13	Skinny models	Counter	D
14	Honking horns	Weakness in evidence	A
15	Honking horns	Weakness in argument	C
16	Burn ties	Structure diagram	B
17	Pink gadgets	Function of element	C
18	Pink gadgets	Flaw + impact	C
19	Science and rhetoric	Draw conclusion	D
20	Science and rhetoric	Purpose of reference	B

**Multiple Choice Justifications****Questions 1 and 2****Analysis**

- Ex The UN, for example, has developed a game called Food Force which involves competing to provide the best aid strategy.
- R1 They have great potential to develop the brain and ethical thinking.
- IC Computer games do not have to be menacing, war-like things which turn young men into non-communicative, passive-aggressive blobs.
- C Ideas like this should be combined with the resources and technological advances of the big games companies.

**Key**

- 1) D  
2) C

**Question 3****Key D**

- R1 Engaging in activities that are in line with your values and interests can improve your sense of wellbeing.
- R2 You will be happier if you focus on the positives in life by jotting them down in a notebook.
- IC You can make a difference to your own happiness.
- C Spend time doing the things you enjoy and write about them.

This isn't strong but it is an argument.

- A Is a report – a piece of information and a comment about it. It could be reworked into an argument, but as it stands, it is not an argument.
- B explanation
- C Quotation with a fairly random and unsupported opinion tacked on.

**Question 4**

- A It is impossible to tell what impact this evidence has on whether that conclusion can be drawn unless we also know what proportion of women in the study were smokers. So we cannot be sure whether it strengthens or weakens.

**Question 5****Key C Both**

- (i) If understanding which part of the brain is active when someone feels an emotion (eg anger) does not equate to knowing what that person is feeling (anger that one is powerless in the face of society, anger that one's child is unjustly treated at school, anger at oneself, anger that one's partner does not clean the kitchen, anger at an insult, anger at a lie etc) then mri scanning will not tell us directly 'what our pets are feeling.'
- (ii) If our knowledge of pet cats and dogs is based on our understanding of the human brain, we will only be able to map emotions which correspond to ours. If dogs or cats have different emotions which do not correspond to ours, we will not be able to tell what they are through brain imaging.

**Questions 6 and 7****6 Key A**

There are so many variables that we cannot be certain that male teachers have an effect on learning at all. Furthermore, it is uncertain what is meant by achievement: meeting certain targets – but the targets we have are not comparable; achieving level 4 in three subjects at primary school, versus achievement in English in year 9 and achievement in five subjects at 16. Should we look at the percentage of boys hitting targets or at the gap between girls and boys?

**7 Key C**

- (i) the statistics don't follow a single year group, but this does not mean that, with such large samples, we cannot draw conclusions about general trends of achievement.
- (ii) The school statistics are comparing percentages of girls/boys who got a similar result, whereas the university statistics talk about percentages of specific results being given to women. If 59% of graduates are women, then this statistic shows men and women achieving equally. So we cannot compare statistics like this. (I'm not sure I've phrased this question properly – please help)
- (iii) The gap does not grow throughout secondary school according to the statistics we have. It is actually slightly smaller at GCSE than in year 9.

**Question 8****Key**

- 6) A this mirrors the pattern of reasoning.

The others don't.

**Questions 9 and 10****9****Key B ii only**

- (i) If the survey produced information from a large sample which reliably showed that learning an instrument had a significant positive effect on learning, we would expect it to apply also to the UK. The effect of music on the brain is likely to apply to all people and not be affected by the minor differences which exist between the English and the Americans. So the fact that this information comes from a US Gallup survey does not give us a reason why the statistics do not prove that music makes you smarter.
- (ii) The real problem with this survey is that it asks people for their subjective, uninformed opinion. Just because many people think that there is a link between learning an instrument and academic performance / self-discipline does not mean that there is.

10

**Key A**

The additional information gives us more objective information that there is a correlation between learning a musical instrument and higher academic performance. However, correlation is not the same as cause. If children who learn instruments have parents who are supportive of learning, the positive learning and home environment may be the cause of both the instrument learning and the higher academic performance. So we can't be sure that playing a musical instrument has any effect on the brain which leads to better learning.

- B Two large, well run studies of whole year groups would be sufficient to start drawing conclusions if they had ruled out other causal possibilities.
- C One study does come from national tests, which would probably be a reliable source of information, but the study does not show a strong causal link because of other possible causal influences.
- D This slight lack of knowledge is not enough to weaken the support for the claim. Even if the difference in performance is very small there is a consistent difference.

**Question 11**

B is the only diagram which matches the descriptions.

**Questions 12 and 13**

- 12 C Clothes are not flat paintings to hang on walls but three dimensional constructions which must exist in a relationship with the wearer.  
This gets the idea of a woman being important to clothes in a way that a wall is not important to paintings.
- A A painting does not care which wall it hangs on but a woman does care which clothes she wears.  
This gets the relationship the wrong way round. The point would be whether it mattered to the clothes which woman they were hung on.
- B Artists intend people to look at their paintings. Fashion designers intend people to look at their designs.  
This states the obvious and does not highlight a problem with the analogy.
- D It is patronising to women to suggest that they are only as important as walls.  
The attitude towards women in the argument is patronising, but this is a problem with the argument rather than with the analogy. It also doesn't quite suggest that they are only as important as walls in the sweeping way suggested by the distractor.



13

**Key**

- D Fashion design is not only art, but also profoundly influential on our everyday lives. This is the only answer which addresses the argument that we should use skinny models because fashion is art which needs a particular background. It does this by pointing out that fashion is more than art, and that every day concerns need to be taken into consideration.
- A Fashion designers should restrict themselves to making clothes for real women. This is an opinion which opposes the notion of fashion as art, but does not really counter it. It approaches the idea that fashion should address the needs of real women, but does not manage to counter the argument in the passage that skinny models should be used because of fashion's status as art.
- B Fashion designers should stop giving themselves pretensions to be artists, they are only making clothes. Again, this opposes the notion of fashion as art, but not strongly and it does not address the use of the argument that fashion is art to justify skinny models.
- C Fashion design has an important role in creating the look, the art and the culture of the time. This could be used either for or against the use of skinny models.

**Questions 14 and 15****14 Key A**

the problem with the USE of the statistics is that they do not demonstrate what the author wants them to. We would need to know that the roads needed to be developed. We need to assume that Germany's motorway density is a good thing. Etc.

- B the differences between Britain and Germany are irrelevant to the question of the use of the statistics.
- C the environmental unfriendliness would be a counter argument rather than a problem with the use of the statistics to demonstrate that our roads are inadequate.
- D might tempt weaker students; that the motorways are only 1% of our roads could be taken as evidence that our roads are inadequate. Certainly the point is that our road network is inadequate because we don't have enough motorways. So this point does not express a weakness.

**15 Key C**

the author repeatedly attacks the arguer; honking horns, driving round in circles etc  
 the author gives no reasons why more roads are necessary for society to progress.  
 The author distorts the argument of the opposition - no more roads prejudice, make do and mend consensus.

The author does not unfairly restrict the options.

**Question 16****Analysis**

- R1 They impose conformity
- R2 turn men into wage slaves
- R3 and remind the wearer that his bosses have him by the neck.
- IC1 so ties are a symbol of oppression.
- R5 men who wear them too tight have a higher risk of glaucoma and
- R6 all of us risk strangulation as we gain weight
- IC2 They are a health risk
- R7 And then there are novelty ties – as good a reason as any for binning ties.
- IC3 Ties should be banished to history
- C It is time that men rebelled and burned their ties.

**Key B****Questions 17 and 18****Analysis**

**Context:** Games publishers are desperate to get more women playing: after all, we represent a shade more than 50% of the population and that's a lot of disposable income not being chucked at the likes of EA, Lionhead, Sony et al. (explains why games publishers want to get more women playing)

- R1 [they are not] thinking about what turns women off games (too much blood, soldiers, aliens, Lara Croft),
- R2 They've decided the way to our hearts is through pink hardware.
- R3 The fact that I am female and that I like both pink and gadgets does not mean that I like pink gadgets.
- A I am typical.
- R4 It's patronising to try to sell us stuff we don't want by making things pink.
- C Sorry guys, you have to find a better way of reaching out to women.

**17****Key C explanation (see analysis)**

It is not a counter argument because it is not arguing the opposite case. It is not a reason because it does not play a part in the argument as such, but sets the context. It is not an assumption because it is stated.

18

**Key C**

Just because some women do not like pink gadgets does not mean that no women like pink gadgets. This barely weakens the support for the claim because the games companies still need to address women's interests.

The first part of the answer does represent a weakness in the argument. It has to be assumed that the author is typical for the use of pink hardware to be a poor way of reaching out to women. However, the second part of the answer shows that this is only a slight weakness because it does not weaken the other support given to the claim by R1 and R3.

- A The reasoning does not misrepresent the games publishers' case. They exist to make money so it is not a distortion of their aims to suggest that they want to make money from women. It also does not suggest that the games manufacturers are ONLY interested in women's money, just that they are interested. Although straw person can be a rhetorical device, it can affect the strength of support for a conclusion.
- B This reasoning does not misrepresent the games publishers' case. The explanation is also weak.
- D The first part of this answer does represent a weakness in the argument. However the explanation overstates the degree of weakness, and only explains that the author is generalising (which she may not be – assuming that she is typical is not quite the same as generalising).

**Questions 19 and 20**

19

**Key D**

i) Science is not prepared to accept tenuous challenges, but the reasoning leaves it open that a challenge based on evidence would be considered.

ii) It might be beneficial for scientists to learn about rhetoric, but this would be a possible solution to the problem rather than a conclusion that can be drawn from the reasoning. We certainly cannot conclude that scientists must learn about rhetoric.

Can't conclude iii) from the passage. It treats science and rhetoric as different, but says nothing to suggest that a scientist might not use a rhetorical attack which was based on scientific methods, for example.

20

**Key B**

It suggests that fairness and emotive arguments have no role in balancing scientific claims based on evidence.

A Not all important issues are based on science. Arguments may be good without being based on science. This distractor misses the point about another side balancing a debate.

C No, it suggests that reasonable doubt is not enough to counter a strong scientific theory based on evidence and where there is consensus amongst scientists. There is no suggestion that journalists and lawyers should not use reasonable doubt in court.

D This misses the point. The suggestion is not that the two theories are equally certain, but that in either case, challenge should come from within science and be based on evidence rather than operate according to principals of fairness.

**Question 21**

**Name and briefly explain the function of the following elements in the structure of the argument about genius:**

[1 mark] for the name, [1 mark] for the explanation. Credit a correct explanation even where the name is incorrect.

**(a) 'Trouble is, the thinking is wrong.' (paragraph 3) [2]**

Intermediate conclusion (1) supported by reasoning in paras 3 – 5 (3 – 7 depending on interpretation) (1) . Gives support directly to MC (1 mark)

OR

Responding to the counter argument (1) that genius is born / outlined in the first two paragraphs (1)

Or

Intermediate conclusion (1) responding to counter argument (1).

**(b) 'The most gifted child runners usually do not go on to be Olympic champions.' (paragraph 4) [2]**

Example (accept analogy / comparison) used to support the claim that 'there is no guarantee that a brilliant child will make a brilliant adult.'

- (c) 'It [creating elite schools or classes] gives the wrong message to those children who are not selected, at a crucial stage in their development.' (paragraph 6) [2]

Intermediate conclusion (accept Reason) – supports the claim that, 'when it comes to creating an environment in which they can fulfil their potential, it now seems that we're getting it wrong.'

OR IC, supported by R, 'it tells them that ... they will never break the mould their genes have cast for them.'

[1 mark] for name, [1 mark] for explanation

- (d) We need to change education to give each individual the best chance of coming close to greatness, not just the brightest children. (Not in text) [2]

Further conclusion which can be drawn from the reasoning in the passage / unstated conclusion / implied conclusion [2]

Conclusion. It draws together intermediate conclusions / overall conclusion drawn from the intermediate conclusions / other expression which might describe a further conclusion but might equally describe a stated main conclusion. [1]

THERE ARE NO MARKS for main conclusion. A main conclusion is stated in the argument.

There are NO MARKS for assumption. The sentence is not an assumption because it follows from the reasoning rather than being a missing step between reasons and conclusion.

## Question 22

**Analyse in detail the structure of the reasoning in paragraph 7 by identifying reasons, intermediate conclusions etc** [9]

### Analysis of Reasoning AO1

In all cases performance descriptors refer to candidates performing at the top of the band. Any candidate performing above the descriptor enters the bottom of the next band.

Candidates should demonstrate understanding of argument structure.  
Candidates should identify elements of subtle and complex arguments using appropriate terminology.

	<b>Performance descriptors</b>
Level 4 7 - 9	Candidates demonstrate thorough understanding of argument structure, including some complexity. Candidates are able to identify elements of complex reasoning accurately using appropriate terminology. Mistakes are rare and not serious.
Level 3 5 - 6	Candidates demonstrate a clear understanding of argument structure. Candidates are able to identify most elements of reasoning accurately using appropriate terminology. They may make mistakes, occasionally serious ones.
Level 2 3 - 4	Candidates demonstrate basic understanding of argument structure. Candidates are able to identify some elements of reasoning accurately using appropriate terminology. They may mix this with gist and misunderstanding.
Level 1 1 - 2	Candidates demonstrate limited understanding of argument structure. Candidates may provide poor paraphrases of isolated elements of arguments or give overall gist.
0	No creditworthy material

**Ev from Carol Dweck:**

- R1 They tend to develop an inflexible mindset and (R) stick to things they know they'll succeed at, she says.
- IC1 has found that telling students they are one of the elite discourages them from trying things that may challenge them and potentially make them look less smart.  
(end of evidence)
- IC2 / R Streaming makes it harder for them to deal with failure.
- C More surprisingly, this form of streaming can be disruptive for brilliant children as well

Accept IC2 as reason. IF it is clear that the student understands that it is supported by evidence from Carol Dweck, it is an indication of a high level of response.

Very strong answers will show that the evidence has a reason and intermediate conclusion, and will indicate how the structure works.

## Question 23

**‘The thinking [about genius as a gift] is wrong.’ (Paragraph 3) Evaluate the support given to this claim by the reasoning in paragraphs 3 – 5. [21]**

Performance descriptors refer to candidates performing at the top of the band. Any candidate performing above the descriptor enters the bottom of the next band.

	<b>Performance Descriptors</b>
Level 4 17 - 21	Candidates demonstrate sound, thorough and perceptive evaluation of strength and weakness in the support for the claim that genius as a gift is wrong. They provide consistent and accomplished evaluation of the impact of this strength and weakness on the overall support given by the reasoning to this claim. Candidates select key points to evaluate. Inappropriate forms of evaluation are rare and not serious. Candidates have evaluated the reasoning, making some relevant points to support their evaluation.
Level 3 12 - 16	Candidates demonstrate a clear understanding of weakness in the support for the claim that genius as a gift is wrong. They consistently evaluate the impact of this on the overall support given by the reasoning to this claim. Candidates begin to evaluate strength more clearly. Candidates select points to evaluate, but not always key points. Inappropriate forms of evaluation (disagreement, counterargument, false attribution of weakness) may occur. Candidates have made a mixture of relevant evaluation and irrelevant or inappropriate points in an attempt to evaluate the reasoning.
Level 2 7 - 11	Candidates demonstrate basic awareness of strength and weakness in the support for the claim that genius as a gift is wrong. Valid points may be isolated, but candidates begin to evaluate the impact of weakness on the overall support given by the reasoning to this claim. Candidates may attribute weakness inappropriately and occasionally disagree with the reasoning or provide counterarguments rather than evaluating it. Candidates make the odd relevant evaluative point amidst description and irrelevance.
Level 1 1 - 6	Candidates demonstrate limited awareness of strength and weakness in the support for the claim that genius as a gift is wrong. They make random or isolated valid points, attribute weakness inappropriately and have little awareness of the impact of weakness on the overall support given by the reasoning to this claim. Candidates tend to disagree with the reasoning rather than evaluate it. <i>Candidates' responses are overwhelmingly irrelevant, descriptive or wrong.</i>
0	No creditworthy material

The following instruction is given in the rubric of the question:

*‘Support your evaluation by **selectively** referring to:  
Flaws in the reasoning and their impact on the strength of the reasoning.  
Assumptions which must be made and their impact on the reasoning.  
The effectiveness of the use of evidence and examples.’*

This rubric is intended to give support to candidates rather than to provide a straitjacket which limits answers. Marks are allocated on the basis of a holistic assessment of the quality of the candidate’s answer. Candidates do not need to refer to all three bullet points to gain good marks. A candidate who writes an answer which indicates good or perceptive understanding of key flaws and how they affect the support for the claim, but who does not refer to assumptions or the use of evidence can still access high marks. Quality not quantity!

### Question 23

**‘The thinking [about genius as a gift] is wrong.’ (Paragraph 3) Evaluate the support given to this claim by the reasoning in paragraphs 3 – 5. [21]**

#### Indicative content

#### Flaws

Key points: the article gives weak support to the claim that the thinking about genius as a gift is wrong because:

- it conflates success, brilliance, genius and achievement;
- it confuses necessary and sufficient conditions – just because hard work is necessary does not mean that it is sufficient – it may also be necessary to have talent;
- it is inconsistent to suggest that we can all be great whilst tacitly admitting that some children are brilliant;
- it needs to give examples of ‘non-brilliant’ children who have achieved genius-type greatness, but does not.
- It also misrepresents ‘the thinking’ by suggesting that ‘the thinking’ does not include an understanding that hard work is necessary.

Candidates do not have to mention all of these key points to access the top level but it is characteristic of the best candidates that they do select key points to evaluate.



Para	Flaw	Impact
3	Straw person – implies that the current thinking does not recognise the role of hard work etc in moving from bright students to successful community members	If the current thinking does recognise that hard work etc are an important ingredient of this process, then new research which suggests that inspiration, hard work etc are a key part of it does not show that the thinking is wrong.
3 - 5	Conflation – the passage conflates genius, bright, successful, achievement and innate ability.	This persistent conflation completely undermines the reasoning. Because all these things are different, lack of worldly success does not mean that someone is not a genius, for example. Credit a range of comments along these lines.
3	Confuses necessary and sufficient conditions. Just because hard work, inspirational teaching and the right environment are necessary, does not mean that they are sufficient.	So the reasoning does not support the claim that the thinking about genius is wrong. It may be that all these things are necessary, but that there is an inborn, innate talent which is also necessary.
3	Insufficient support for IC claim that, 'it's not born.'	We are certainly 'born' into a particular environment, which might make the difference between fulfilling our potential and not. It may be that we are 'born' with genes which affect how hard working we are, which would also have an impact on whether we fulfilled our potential or not. There is also an acceptance in the article that some children are 'brilliant,' at sport, music, academia etc. This seems to imply that they were born with some particular talent.
3,4,5	Inconsistency	The article argues that genius is 'not born,' yet accepts that children are born brilliant, or with particular talents, which can be nurtured or not, or can develop or not. This is something of a weakness.
4	Inverted reasoning: 'there is no guarantee that a brilliant child will make a brilliant adult.'	There does not need to be a guarantee. You can be born with something (talent, looks etc) and choose not to use it, or prefer a quiet, family life to the rigours of public success. In order to show that 'the thinking is wrong,' the article needs to show that some 'brilliant' adults showed no signs of brilliance or genius as children. It does not do this.
4	Definition of terms – 'brilliant learners' etc.	The fact that there are two groups of 'brilliant' people which do not match does not show that 'brilliance' or 'genius' is not to do with innate talent. It shows only that we are poor at identifying children who may have genius / the potential to be genius, or that we are using the wrong indicators of genius in adults.

5	Confuses necessary and sufficient conditions again	Just because child prodigies also had support, inspirational teaching and worked hard before becoming acknowledged as great adults, does not mean that they did not have talent. As a repetition of a flawed pattern of reasoning this does not weaken the argument further than it already has been, but only because it has so little strength.
5	Causal flaw, 'The notion that people love doing things because they're good at them is back to frong....'	No support for this claim about cause and effect; of course there is a correlation between time spent practising an instrument and expertise, but this does not show that people do not love things that they are naturally good at. There is also a difference between expertise acquired through practice, and brilliance achieved through natural feeling combined with practice which this evidence ignores, but must be of importance in a debate about genius / brilliance. This claim about cause and effect is one of the few aspects of the reasoning which might have shown that innate talent is not necessary for greatness, but it is so flawed that it fails to do this.
5	Generalisation	Sloboda gives evidence about musical expertise and time spent practising, which is then generalised to 'things,' even though it is not clear that the same applies to physics as to flute-playing.
3, 4, 5	Appeal to Authority	The appeal to the authority of anonymous researchers is dodgy. It doesn't actually weaken the (already very weak) argument, but it fails to strengthen, as we have no way of judging their expertise.

### Question 23

**'The thinking [about genius as a gift] is wrong.'** (Paragraph 3) Evaluate the support given to this claim by the reasoning in paragraphs 3 – 5. [21]

#### Assumptions

3	That innate ability is not necessary to brilliance.	Unsubstantiated and therefore significantly weakens the reasoning.
	That brilliance being due only in very small part to innate ability makes the current thinking 'profoundly' wrong.	Because the current thinking is somewhat distorted to ignore the influence of hard work, etc. the depth of wrongness is not as profound as is suggested.
4	An IQ of 130 is sufficient to mark out brilliance / genius	This seems to be too broad a base. It also seems odd to use a simple IQ definition of brilliance and then compare it to 'professional' success. Surely the idea is that 'from' the group of bright children will come the captains of industry etc?

4	Becoming Olympic champion is the definition of sporting brilliance / genius	To a certain extent, this is fine because it is a high honour which can be gained only once every four years. However, there are other titles, such as world champion, which would vie with the Olympics.
4	If brilliance depended on innate talent, the most gifted child runners should go on to be Olympic champions.	There are many gifted child runners and few Olympic champions. They cannot all be Olympic champions – some will fall through injury, others through the choice not to pursue that kind of greatness.

### Evidence and examples

3	'growing body of evidence from psychology and cognitive sciences.'	Vague and therefore gives the impression of being supported by academic research and rigour without this necessarily being the case.
3	'It isn't magic and it isn't born,'	From an anonymous, 'leading researcher,' who could be anyone. Furthermore, the idea of genius as a 'gift' does not mean that it is magic, so this shows the researcher fighting against an imaginary opponent.
4	Hunter school	This is only one school, and whilst it might be a good example of a school which recruits bright youngsters, we have no information on whether any of them have achieved professional heights. Furthermore, the example once again conflates, genius, professional success and being bright. A great many people currently recognised as genius were unrecognised during their lifetimes because their ideas do not fit with professional recognition. This example generalises from the academic world to other forms of genius.
4	Hunter school	Children who gain access to an elite New York school are probably both hard working and from supportive families. So it is hard to say whether they were showing early signs of brilliance, or whether their supportive backgrounds were giving them a boost.
5	John Sloboda has demonstrated a strong correlation between expertise in music and the amount of time spent practising.	John Sloboda may have some expertise, but we cannot be sure. His results will not surprise music teachers, but we cannot be sure about the conclusions about causal relationships drawn from the limited quotation from his work. Furthermore, there is nothing here to differentiate between those who get very good and those who achieve excellence / reach audiences' hearts.

## Question 24

**‘When it comes to creating an environment in which [our children] can fulfil their potential, it seems that we’re getting it wrong. (para 6)’ Evaluate the support given to this claim by the reasoning in paragraphs 6 – 7.[9]**

**Performance descriptors refer to candidates performing at the top of the band. Any candidate performing above the descriptor enters the bottom of the next band.**

	<b>Performance Descriptors</b>
Level 4 7 - 9	Candidates demonstrate sound, thorough and perceptive evaluation of strength and weakness in the support given by the reasoning to the claim that, ‘when it comes to creating an environment in which our children can fulfil their potential, it seems that we’re getting it wrong.’ Candidates select key points to evaluate. Inappropriate forms of evaluation are rare and not serious. Candidates have evaluated the reasoning, making some relevant points to support their evaluation.
Level 3 5 - 6	Candidates demonstrate a clear understanding of weakness in the support given by the reasoning to the claim that, ‘when it comes to creating an environment in which our children can fulfil their potential, it seems that we’re getting it wrong.’ They begin to make effective evaluative points about strength in the reasoning. Candidates select points to evaluate, but not always key points. Inappropriate forms of evaluation (disagreement, counterargument, false attribution of weakness) may occur. Candidates have made a mixture of relevant evaluation and irrelevant or inappropriate points in an attempt to evaluate the reasoning.
Level 2 3 - 4	Candidates demonstrate basic awareness of strength and weakness in the support given by the reasoning to the claim that, ‘when it comes to creating an environment in which our children can fulfil their potential, it seems that we’re getting it wrong.’ Valid points may be isolated, but candidates begin to evaluate the impact of weakness on the overall support given by the reasoning to this claim. Candidates may attribute weakness inappropriately and occasionally disagree with the reasoning or provide counterarguments rather than evaluating it. Candidates make the odd relevant evaluative point amidst description and irrelevance.
Level 1 1 - 2	Candidates demonstrate limited awareness of strength and weakness in the support given by the reasoning to the claim that, ‘when it comes to creating an environment in which our children can fulfil their potential, it seems that we’re getting it wrong.’ They make random or isolated valid points, attribute weakness inappropriately and have little awareness of the impact of weakness on the overall support given by the reasoning to this claim. Candidates tend to disagree with the reasoning rather than evaluate it. <i>Candidates’ responses are overwhelmingly irrelevant, descriptive or wrong.</i>
0	No creditworthy material

## Question 24

**‘When it comes to creating an environment in which [our children] can fulfil their potential, it seems that we’re getting it wrong. (para 6)’ Evaluate the support given to this claim by the reasoning in paragraphs 6 – 7. [9]**

## Indicative content

The conflation of key terms and lack of support for the claim that, ‘the thinking is wrong,’ means that this part of the argument is rather fuzzy and provides only poor support for the claim that, ‘When it comes to creating an environment in which [our children] can fulfil their potential, it seems that we’re getting it wrong.’

Para	Comment	Impact
6	Unsupported claim, ‘if the aim is to nurture successful adults, creating elite schools ... doesn’t work.’	There is nothing to suggest that creating elite schools does not work in creating successful adults. The only example is of the Hunter school, and most of those students now live happy, fulfilled lives. Some of them seem to have achieved ‘professional heights.’ Either of these measures could be taken to indicate ‘success.’ Furthermore, if ‘brilliant children’ need to work hard, receive inspirational tuition and be well supported, these conditions might be met in an elite school.
6	There is no evidence that any elite schools do get, ‘the lion’s share of the resources.’	If they do not, then it does not follow that we are getting education wrong.
6	Conflation between nurturing successful adults / educating children to fulfil their potential and genius.	As nurturing successful adults and allowing (all) children to fulfil their potential are very different from supporting genius, the educational means of achieving these aims may be different. So we may not be getting education badly wrong.
6	‘Unless these children are highly motivated and confident, the chances are that they will carry this message with them forever.’	Part of the message is, that unless any of us is highly motivated and confident, we won’t achieve all we are capable of. So this doesn’t seem to progress the argument.
7	Appeal to authority	Carol Dweck has ‘spent a lifetime studying motivation in children,’ so she may have expertise in this area, and her expertise is precisely relevant to the claims being made. So it is probably a reasonable appeal.

	'Streaming can be disruptive.'	This is certainly interesting evidence, and perhaps counter intuitive. It is some of the best evidence in terms of supporting the claim that we are getting education wrong. However, this evidence can be questioned. Perhaps it is not essential to tell children that they are part of an elite in order to push them to achieve all they can and remain creative. Perhaps it is the culture surrounding them that makes them become inflexible; it would be interesting to compare these American children with Chinese or Russian elite children and see if the Chinese or Russian children become similarly inflexible. We can also question the focus on 'smart' children and whether this can be generalised.
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**Question 25**

**'All children should be educated in exactly the same way.'**

**Write your own argument to support or challenge this claim.**

**[18]**

	Performance Descriptors
Level 4 14 - 18	Candidates produce cogent, sound and perceptive reasoning focussed on the claim given in the question. Most importantly, candidates' reasoning demonstrates an accomplished argument structure using strands of reasoning with examples, reasons and intermediate conclusions giving strong support to the conclusion. Candidates define complex or ambiguous terms, such as <i>educated or same</i> , and may qualify the conclusion in response to this definition. Candidates anticipate and respond effectively to key counter arguments. Language clear, precise and capable of dealing with complexity. Blips rare.
Level 3 10 - 13	Candidates produce effective reasoning to support their conclusion. Most importantly, arguments will have a clear structure, which may be simple and precise or attempt complexity with some blips. Examples, reasons and intermediate conclusions generally support the conclusion well with occasional irrelevance or reliance on dubious assumptions. Candidates may attempt to define complex or ambiguous terms such as <i>educated</i> and may anticipate and respond to counterargument. Language clear and developing complexity.
Level 2 6 - 9	Candidates demonstrate the ability to produce basic reasoning with reasons and examples which give some support to their conclusion but may rely on a number of dubious assumptions. Candidates' reasoning has some relevance to the claim given in the question. Clear, straightforward, perhaps simplistic. Occasionally disjointed. Language simple, clear. Candidates may include a counter argument or counter reason, but respond to it ineffectively if at all.
Level 1 1 - 5	Candidates demonstrate limited ability to reason. They tend to give examples instead of reasoning. Disjointed, incoherent. Reasons often do not support conclusion. There may not even be a stated conclusion. Language vague.
0	No creditworthy material

Candidates will not have time to produce thorough arguments covering all possible strands of reasoning and responding to all counter arguments. We should reward candidates who have demonstrated the ability to argue cogently, coherently and concisely. We are looking for an intelligent, thoughtful, structured response.

**Quality of Language**

5	Coherent and competent language capable of dealing with nuance and complexity. Technical terms are used accurately and appropriately.
4	Good use of language to communicate critical thinking points. Tends to use technical terms appropriately. May include slightly stilted note form (omitting subject, for example) providing points are made clearly. May be succinct rather than flowery.
3	Basically ok – grammatically sound but not especially fluent or competent. Possibly inclined to use sophisticated vocabulary in a rhetorical way with little regard to meaning. May misuse technical terms occasionally.
2	Plenty of basic mistakes, including in technical terms, but not so awful that it is incomprehensible. Tends to be vague – for example using 'it' without clear reference.
1	Incoherent, disjointed, grammatically weak and incomprehensible.
0	No creditworthy material

General guidelines for quality of language:

We want to credit language which means something, and which is clear, succinct and precise.

We want to credit communication of good thinking.

We do not want to over-reward flowery or waffly language which says very little.

We do not want to penalise candidates for slips of the pen caused by pressure of time.

# Grade Thresholds

Advanced GCE Critical Thinking (H050/H450)  
June 2008 Examination Series

## Unit Threshold Marks

Unit		Maximum Mark	A	B	C	D	E	U
F491	Raw	80	59	50	41	33	25	0
	UMS	120	96	84	72	60	48	0
F492	Raw	120	82	73	64	55	46	0
	UMS	180	144	126	108	90	72	0
F493	Raw	80	55	49	43	37	31	0
	UMS	120	96	84	72	60	48	0
F494	Raw	120	79	70	62	54	46	0
	UMS	180	144	126	108	90	72	0

## Specification Aggregation Results

Overall threshold marks in UMS (ie after conversion of raw marks to uniform marks)

	Maximum Mark	A	B	C	D	E	U
<b>H050</b>	300	240	210	180	150	120	0
<b>H450</b>	600	480	420	360	300	240	0

The cumulative percentage of candidates awarded each grade was as follows:

	A	B	C	D	E	U	Total Number of Candidates
<b>H050</b>	9.19	25.28	46.43	67.53	84.20	100	24988
<b>H450</b>	11.25	31.62	57.05	78.6	91.51	100	2791

## 27779 candidates aggregated this series

For a description of how UMS marks are calculated see:

[http://www.ocr.org.uk/learners/ums\\_results.html](http://www.ocr.org.uk/learners/ums_results.html)

Statistics are correct at the time of publication



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