

Level 2 Award

B902

Thinking and Reasoning Skills

Unit 2: Thinking and Reasoning Skills

Case Study

Specimen Paper

Time: 1 hour

Candidates answer on the question paper.

Additional materials: Resource Booklet (pre-release)

Candidate
Forename

Candidate
Surname

Centre
Number

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Candidate
Number

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INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do not write in the bar codes.
- Do not write outside the box bordering each page.
- Write your answer to each question in the space provided.
- You will be assessed on the quality of your written communication in question 18. The quality of your grammar, spelling and punctuation will affect the mark for these questions.

INFORMATION FOR CANDIDATES

- The number of marks for each question is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is 60.

FOR EXAMINER'S USE	
A	
B	
TOTAL	

This document consists of **10** printed pages and **2** blank pages.

Section A: Thinking through the documents

You are advised to spend no more than 40 minutes on this Section. It is worth 40 marks.

Answer all the questions in this section.

In this section you will be required to use all your reasoning, evaluation, information processing and creative thinking skills on the documentary sources.

When it is necessary to refer to one specific source in order to answer the question, you will be directed to that source.

1 In Document 2A Anita provides the following argument:

“.....vivisection has been around for over a hundred years and medicine has been getting better and better so clearly animal experiments do work.”

Mark up Anita’s argument in the box above to show the different argument components:

- Underline her conclusion [1]
- Circle **one** indicator word [1]
- Put brackets around any **two** reasons [2]

2 In Document 2A Ben provides the following argument:

“The British Medical Journal for July 2004 says 5% of all hospital admissions in the UK every year are due to an adverse drug reaction (ADR) of which 18,000 resulted in death. That is five times the number of people killed in traffic accidents each year! And all these drugs have been tested on animals and found to be safe! So it is obvious animal tests are useless and therefore we should stop them at once!”

Mark up Ben’s argument in the box above:

- (a) Circle **both** conclusion indicator words [2]
- (b) Underline the main conclusion [1]

3 In Document 2A Ben argues:

“Once you allow experiments on mice, you may as well allow them on monkeys and apes and then why stop there? Before you know it you will be defending experiments on human beings”

Ben’s reasoning is an example of a common flaw.

Which one of the following correctly names the flaw? Please tick the correct response.

Straw man	<input type="checkbox"/>
Tu quoque	<input type="checkbox"/>
Ad hominem	<input type="checkbox"/>
Slippery Slope	<input type="checkbox"/>

[1]

4 A student studying Documents 6 to 9 made some notes on the credibility of three witnesses – Laurie Pycroft, Mel Broughton and Professor Aziz. These are the student’s notes:

Credibility Criterion:	
A	Vested interest to lie
B	Lacks relevant expertise
C	Has good ability to see
D	May have a bias in presenting the evidence
E	Lacks reputation
F	Lacks ability to see

Explanations:	
1	Because he is so passionate about animals he is even opposed to zoos
2	Because he earns his living by doing these experiments
3	Because he has not even studied A level sciences
4	Because he works in the laboratories where the experiments take place
5	Because he is a gardener and has no direct access to the laboratories
6	Because he is a school drop-out.

Please complete the table below, by matching the witnesses to the appropriate credibility criteria (A to F), which in turn should be matched to the appropriate explanations (1 to 6). There are two for each witness.

Please circle the correct letter or number. The first pair has been done for you.

Name of witness	Credibility Criterion	Explanation
Laurie Pycroft	A B C D E F	1 2 3 4 5 6
	A B C D E F	1 2 3 4 5 6
Mel Broughton	A B C D E F	1 2 3 4 5 6
	A B C D E F	1 2 3 4 5 6
Professor Aziz	A B C D E F	1 2 3 4 5 6
	A B C D E F	1 2 3 4 5 6

[10]

5 Laurie Pycroft claims “The suffering of a few animals can vastly improve the quality of life of millions of people”.

Professor Stein claims “The suffering of a few animals can vastly improve the quality of life of thousands of people”.

Professor Aziz estimates that about two monkeys a year are involved in his research and about 40,000 people have benefitted.

Identify one way in which Laurie Pycroft’s claim above is **not** backed up by either Professor Stein or Professor Aziz:

..... [1]

6 The British Medical Journal for July 2004 reports that there are 18,000 deaths every year in the UK from adverse drug reaction (ADR). In Document 2A Ben uses this evidence to draw the conclusion that animal testing of drugs does not work.

What further information or evidence would you want to know before accepting or rejecting Ben’s conclusion and why would that further information be useful?

Further information wanted:

..... [2]

Reason for wanting it:

..... [2]

7 In Document 2A Ben claims that all animal experiments are motivated by the desire of commercial companies to make an easy profit.

Identify **one** piece of evidence from **Document 3** which weakens Ben’s claim and explain why it weakens his claim.

Evidence which weakens Ben’s claim:

..... [1]

Explanation:

..... [2]

8 In Document 2A Ben objects to Anita’s claim that the reason for people living longer is the improvements in medicine. He says there could be other reasons for people living longer.

Give **one** other possible reason for the increase in life expectancy over the last century.

..... [1]

9 In Document 2B Ben asks “What difference does size make?” implying that the only difference between a mouse and an ape is one of size.

Give one further difference between a mouse and an ape and explain how that difference could be used to justify the ban on experiments on apes but not on mice.

Hint: You may find it helpful to refer to Document 3 and 5 but you do not have to quote from these documents.

Further difference:

.....
..... [1]

Briefly explain why the difference might justify a ban on experiments on apes:

.....
.....
..... [2]

10 In Document 2B Ben makes an analogy between “killing and dissecting a rat in a lab and torturing and killing a cat in a park”.

Identify **one** significant difference between these two actions which weakens the analogy. Complete the following sentence to explain this.

Killing and dissecting a rat in a lab (is).....
.....
whereas killing a cat in a park (is).....
..... [2]

Questions 11 to 14 require close reference to Document 2B together with the questionnaires below.

Anita, Priya and Ben were asked to complete questionnaires about their opinions upon human and animal rights.

They each ran out of time before they had finished completing it and they failed to put their names on the questionnaires. So they have been labelled Person A, Person B and Person C.

Instructions:

Read the list of actions across the top of the table, and the list of living things down the side. Anita, Priya and Ben recorded their views using the following key:

'x' = it is always wrong or mostly wrong for this action to be committed against the particular living thing in your view.

'✓' = it is always right or mostly right for this action to be committed against the particular living thing in your view.

'?' = it is uncertain whether it is right or wrong for this action to be committed against the particular living thing in your view.

Then answer questions 12 to 15 which follow.

Person A					
action \ living thing	Kill or destroy it without any reason	Kill or destroy it in order to eat or use parts of it	Perform harmful experiments on it for the benefit of other people	Perform harmful experiments on it for the sake of advancing scientific knowledge	Harm it for your own pleasure
An adult human being	X	X	X	X	X
A human child	X	X	X	X	X
A human embryo					
A great ape					X
A monkey			X	X	X
A rat			X	X	X
A fish			X	X	X
A weed					

Person B					
action living thing	Kill or destroy it without any reason	Kill or destroy it in order to eat or use parts of it	Perform harmful experiments on it for the benefit of other people	Perform harmful experiments on it for the sake of advancing scientific knowledge	Harm it for your own pleasure
An adult human being	X	X	X	X	X
A human child	X	X	X	X	X
A human embryo					
A great ape			✓	✓	
A monkey			✓	✓	
A rat			✓	✓	
A fish			✓	✓	
A weed			✓	✓	

Person C					
action living thing	Kill or destroy it without any reason	Kill or destroy it in order to eat or use parts of it	Perform harmful experiments on it for the benefit of other people	Perform harmful experiments on it for the sake of advancing scientific knowledge	Harm it for your own pleasure
An adult human being					
A human child					
A human embryo					
A great ape	X		X	X	X
A monkey	X		?	?	X
A rat	X		?	?	X
A fish					
A weed					

11 Identify the author of each questionnaire by ticking the correct box.

(a) Person A is	Anita	<input type="checkbox"/>	Ben	<input type="checkbox"/>	Priya	<input type="checkbox"/>
(b) Person B is	Anita	<input type="checkbox"/>	Ben	<input type="checkbox"/>	Priya	<input type="checkbox"/>
(c) Person C is	Anita	<input type="checkbox"/>	Ben	<input type="checkbox"/>	Priya	<input type="checkbox"/>

[3]

12 Person A has indicated that they think harmful medical experiments are wrong when performed on humans, monkeys, rats and fish. They have not had time to complete the section on great apes.

Which of the following do you think Person A is most likely to say about experiments on apes? Tick the right answer.

They are always or mostly wrong.	<input type="checkbox"/>
They are always or mostly right.	<input type="checkbox"/>
It is unclear whether they are right or wrong.	<input type="checkbox"/>
They are sometimes right and sometimes wrong.	<input type="checkbox"/>

[1]

13 Person A believes it is wrong to experiment on humans, monkeys, rats and fish but not on weeds. Which one of the following reasons must she/he accept in order to argue for this? Tick the right answer.

It is wrong to experiment on humans	<input type="checkbox"/>
It is wrong to experiment on anything which is alive	<input type="checkbox"/>
It is wrong to experiment on anything which can feel pain.	<input type="checkbox"/>
It is wrong to experiment on anything which is intelligent.	<input type="checkbox"/>

[1]

14 Person B has indicated that they think that experiments on animals are right and that experiments on human adults and children are wrong. But he/she has not said what they think about experiments on human embryos.

State what you think B would say about experiments on human embryos **and** explain why you think B would take that view.

.....

.....

..... [3]

Section A Total [40]

Section B: Thinking to a conclusion based on reasons and evidence.

Allow approximately 20 minutes for this section.

It is worth 20 marks.

There are 5 questions in this section.

In this section you will be required to use all your reasoning, evaluation, information processing and creative thinking skills to come to a reasoned decision or conclusion.

You may draw on any of the documents for evidence and information to support you in your argument.

- 15** In Documents 2A and 2B both Ben and Anita present the issue of animal experiments as if there are only two options: either ban all animal experiments or allow all animal experiments.

Describe in detail **one other** option that the law could adopt on this issue.

..... [2]

- 16** In Document 2B it is pointed out that Priya’s grandmother has Parkinson’s disease.

Briefly explain how this may influence Priya’s views on animal experiments.

..... [2]

- 17** Using the information in the Documents identify and state four claims which could be used as evidence or reasons in support of allowing medical experiments on higher primates like the great apes.

Claim 1:

..... [1]

Claim 2:

..... [1]

Claim 3:

..... [1]

Claim 4:

..... [1]

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Section A Thinking through the documents		
Question Number	Answer	Max Mark
1	<p>In Document 2A Anita provides the following argument:</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p><i>“.....vivisection has been around for over a hundred years and medicine has been getting better and better so clearly animal experiments do work.”</i></p> </div> <p>Mark up Anita’s argument in the box above to show the different argument components:</p> <ul style="list-style-type: none"> • Underline her conclusion [1] • Circle one indicator words [1] • Put brackets around any two reasons [2] <p>Credit 1 mark for each correctly identified part of the argument “.....(vivisection has been around for over a hundred years) and (medicine has been getting better) and better <u>so</u> <u>clearly animal experiments do work.</u>”</p> <ul style="list-style-type: none"> • Credit 1 mark for (vivisection has been around for over a hundred years) • Credit 1 mark for (medicine has been getting better) • Credit 1 mark for <u>so</u> • Credit 1 mark for <u>clearly animal experiments do work</u> or <u>so clearly animal experiments do work</u> 	[4]
2	<p>In Document 2A Ben provides the following argument:</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p><i>“The British Medical Journal for July 2004 says 5% of all hospital admissions in the UK every year are due to an adverse drug reaction (ADR) of which 18,000 resulted in death. That is five times the number of people killed in traffic accidents each year! And all these drugs have been tested on animals and found to be safe! So it is obvious animal tests are useless and therefore we should stop them at once!”</i></p> </div> <p>Mark up Ben’s argument in the box above:</p> <p>(a) Circle both conclusion indicator words.</p> <p>(b) Underline the main conclusion.</p> <p>Credit 1 mark for each correctly identified part of the argument</p> <ul style="list-style-type: none"> • Credit 1 mark for <u>so</u> • Credit 1 mark for <u>therefore</u> • Credit 1 mark for <u>we should stop them at once</u> or <u>therefore we should stop them at once</u> 	[3]

Section A Thinking through the documents																														
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3	<p>In Document 2A Ben argues:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><i>“Once you allow experiments on mice, you may as well allow them on monkeys and apes and then why stop there? Before you know it you will be defending experiments on human beings”</i></p> </div> <p>Ben’s reasoning is an example of a common flaw. Which one of the following correctly names the flaw? Please tick the correct response.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Straw man</td> <td style="width: 30%; text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Tu quoque</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Ad hominem</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Slippery Slope</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> <p>Credit 1 mark for D slippery slope</p>	Straw man	<input type="checkbox"/>	Tu quoque	<input type="checkbox"/>	Ad hominem	<input type="checkbox"/>	Slippery Slope	<input checked="" type="checkbox"/>	<p>[1] [1]</p>																				
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Section A Thinking through the documents		
Question Number	Answer	Max Mark
5	<p>Laurie Pycroft claims “The suffering of a few animals can vastly improve the quality of life of millions of people”.</p> <p>Professor Stein claims “The suffering of a few animals can vastly improve the quality of life of thousands of people”.</p> <p>Professor Aziz estimates that about two monkeys a year are involved in his research and about 40,000 people have benefitted.</p> <p>Identify one way in which Laurie Pycroft’s claim above is not backed up by either Professor Stein or Professor Aziz:</p> <p>Credit one mark for identifying that there is a disagreement between Laurie and the other witnesses over the numbers who benefit from these experiments.</p> <p>The candidate can but does not have to quote directly from the text</p> <p>Examples</p> <p>Laurie claims millions of people will benefit whereas Professor Stein talks of thousands and Professor Aziz talks of 40,000.</p> <p>Laurie estimates that a much higher number benefit from the experiments than the other two witnesses</p> <p>Laurie exaggerates the number who benefit by comparison with the other two witnesses</p>	[1]
6	<p>The British Medical Journal for July 2004 reports that there are 18,000 deaths every year in the UK from adverse drug reaction (ADR). In Document 2A Ben uses this evidence to draw the conclusion that animal testing of drugs does not work.</p> <p>What further information or evidence would you want to know before accepting or rejecting Ben’s conclusion and why would that further information be useful?</p> <p>Further information wanted:</p> <p>Reason for wanting it:</p> <p>It is anticipated that candidates will describe further evidence in the form of figures with which to compare and evaluate the 18,000 ADR deaths cited by Ben</p> <p><i>Credit two marks</i> for any relevant request for further information which is clearly and precisely expressed.</p> <p><i>Credit one mark</i> for any relevant request for further information which lacks precision.</p> <p>Examples</p> <p>Would want to know how many animal tested drugs are taken each year. (1 mark)</p> <p>Would want to know what the figures for ADR were before or in the absence of animal testing. (2 marks)</p> <p>Would want to know what proportion of the 18,000 deaths had involved drugs which were/were not tested on animals. (2 marks)</p>	

Section A Thinking through the documents		
Question Number	Answer	Max Mark
6 (cont.)	<p><i>Credit two marks</i> for a full and adequate explanation of why this additional information allows a better evaluation of the raw number cited by Ben</p> <p><i>Credit one mark</i> for a partial explanation of why this additional information allows a better evaluation of the raw number cited by Ben</p> <p>Examples:</p> <p>Need to know this to make a useful comparison (1 mark)</p> <p>Because although 18,000 looks a lot it might be a small number when seen in proportion to the total number of animal tested drugs taken each year. (2 marks)</p> <p>Because it might be that this number of 18,000 is considerably less than what the number would be without animal testing (2 marks)</p>	[4]
7	<p>In Document 2A Ben claims that all animal experiments are motivated by the desire of commercial companies to make an easy profit.</p> <p>Identify one piece of evidence from Document 3 which weakens Ben's claim and explain why it weakens his claim.</p> <p>Evidence which weakens Ben's claim:</p> <p>Explanation:</p> <p>Credit one mark for selecting any evidence which could weaken Ben's claim.</p> <p>Examples</p> <p>According to government figures for 2005 43% of all animal experiments are conducted by universities. (1mark)</p> <p>According to government figures for 2005 31% of all animal experiments are conducted by commercial, profit making, companies. (1mark)</p> <p>According to government figures for 2005 nearly a third of experiments involving animals were for the purposes of pure research aiming at increasing our knowledge of biology. (1 mark)</p> <p>Credit a second mark for any partial explanation which paraphrases the evidence without drawing out its significance.</p> <p>Examples:</p> <p>Because most experiments are done by universities. (1 mark)</p> <p>Because businesses don't do most of the experiments. (1 mark)</p> <p>Because most experiments are for pure research. (1 mark)</p> <p>Credit a third mark for any full and adequate explanation of how it weakens the claim.</p> <p>Examples:</p> <p>Because the majority of experiments are conducted by universities and they are probably not primarily interested in profit. (2 marks)</p> <p>Because only a third of all experiments are conducted by profit making organisations so the majority of experiments are not for profit. (2 marks)</p>	

Section A Thinking through the documents		
Question Number	Answer	Max Mark
7 (cont.)	Because a third of experiments are for pure research and these are unlikely to have any commercial benefit. (2 marks)	[3]
8	<p>In Document 2A Ben objects to Anita’s claim that the reason for people living longer is the improvements in medicine. He says there could be other reasons for people living longer. Give one other possible reason for the increase in life expectancy over the last century.</p> <p>Credit one mark for any acceptable reason. Examples Because diet has improved. (1 mark) Because health and safety regulations have improved. (1 mark)</p>	[1]
9	<p>In Document 2B Ben asks “What difference does size make?” implying that the only difference between a mouse and an ape is one of size.</p> <p>Give one further difference between a mouse and an ape and explain how that difference could be used to justify the ban on experiments on apes but not on mice.</p> <p>Hint: You may find it helpful to refer to Document 3 and 5 but you do not have to quote from these documents.</p> <p>Further difference [1]</p> <p>Briefly explain why the difference might justify a ban on experiments on apes.</p> <p>Difference: Credit one mark for any further difference Examples Apes are more intelligent than mice. (1 mark) Apes are more developed as social animals than mice. (1 mark) Apes are more developed in level of emotional responses than mice. (1 mark) Apes are genetically closer to humans than mice. (1mark)</p> <p>Explanation: Credit one mark for any partial explanation which makes a link between the difference and our moral/legal reasons for banning experiments. Credit two marks for a full explanation which makes a link between the difference and our moral/legal reasons for banning experiments Example It is wrong to experiment on humans/babies just because they are intelligent/emotionally developed/socially developed so it must be equally wrong to experiment on apes. (2 marks)</p>	[3]

Section A Thinking through the documents		
Question Number	Answer	Max Mark
10	<p>In Document 2B Ben makes an analogy between “killing and dissecting a rat in a lab and torturing and killing a cat in a park”. Identify one significant difference between these two actions which weakens the analogy. Complete the following sentence to explain this.</p> <p>Credit two marks for any significant difference which weakens the analogy which is clearly identified, with both clauses completed. Credit one mark for any partial identification which may lack clarity or leave part of the difference implicit only one clause completed</p> <p>Examples</p> <p>Difference of motivation “Killing and dissecting a rat in a lab is not done for pleasure/out of cruelty whereas the killing of the cat is done for pleasure/out of cruelty” (2 marks) “killing the cat is done for pleasure” (1 mark)</p> <p>Difference of consequence “The killing... of the rat... can/may have good consequences for others whereas the killing of the cat benefits no one” (2 marks) “experimenting on rats is good for people” (1 mark)</p>	[2]
11	<p>Identify the author of each questionnaire by ticking the correct box.</p> <p>Person A is Ben (1 mark) Person B is Anita (1 mark) Person C is Priya (1 mark)</p> <p>Justification</p> <p>Ben draws no moral distinction between experiments on people and experiments on any animal. This fits A exactly. Anita draws a sharp moral distinction between the value of people and the value of animals. This fits B exactly. Priya is less black and white in her views. She endorses a ban on experiments on apes but is not sure about the rightness of experiments on other animals distinguishing animal experiments from gratuitous cruelty to animals. This fits C exactly.</p>	[3]

Section A Thinking through the documents		
Question Number	Answer	Max Mark
12	<p>Person A has indicated that they think harmful medical experiments are wrong when performed on humans, monkeys, rats and fish. They have not had time to complete the section on great apes.</p> <p>Which of the following do you think Person A is most likely to say about experiments on apes? Tick the right answer.</p> <p>Credit one mark for A.</p> <p>Justification</p> <p>A is clearly guided in his thinking by the principle that it is wrong to harm or hurt sentient creatures.</p> <p>He is therefore required to say the same of apes as what he says of other sentient creatures otherwise he is being inconsistent.</p>	[1]
13	<p>Person A believes it is wrong to experiment on humans, monkeys, rats and fish but not on weeds. Which one of the following reasons must she/he accept in order to argue for this? Tick the right answer.</p> <p>Credit one mark for C.</p> <p>Justification</p> <p>A is too narrow as a reason and will not support a conclusion which goes beyond humans to include other animals.</p> <p>D is too narrow as a reason and will not support a conclusion which goes beyond intelligent animals such as primates to include fish.</p> <p>B is too broad as a reason and will not support a conclusion which excludes plant life.</p> <p>C is the only reason which fits perfectly with and exactly supports the conclusion.</p> <p>So C is the correct answer.</p>	[1]
14	<p>Person B has indicated that they think that experiments on animals are right and that experiments on human adults and children are wrong. But he/she has not said what they think about experiments on human embryos.</p> <p>State what you think B would say about experiments on human embryos and explain why you think B would take that view.</p> <p>This is a complex and open question involving counterfactual thinking (what would have been said when nothing was said) and involving both logical and ethical reasoning. It requires teasing out unstated reasons and principles and seeking to extend them beyond the initial data to a potentially indeterminate and problematic case.</p>	

Section A Thinking through the documents		
Question Number	Answer	Max Mark
	<p>The principal difficulty with extending principles uncovered from the data to this hypothetical case is that they could be extended in more than one way as the new case of human embryos has things in common both with the group that B is willing to experiment on and with the group that B is unwilling to experiment upon.</p> <p><i>Credit 3 marks</i> for correctly identifying one possible moral/legal view that B could logically take with clear and developed reasoning relating to significant similarities between embryos and related cases.</p> <p><i>Credit 2 marks</i> for correctly identifying one possible moral/legal view that B could logically take with clear reasoning relating to significant similarities between embryos and related cases.</p> <p><i>Credit 1 mark</i> for correctly identifying one possible moral/legal view B could logically take with some reasoning which attempts to relate significant similarities between embryos and related cases. The reasoning may be unclear or contain some logical inconsistencies.</p> <p><i>0 marks</i> - no creditworthy material (or only identifying possible view with no reasoning present).</p> <p>Examples</p> <p>B thinks that experiments on embryos should not be allowed. This is because embryos are human and will grow into human children and adults. Therefore, even though embryos may not yet be born, they will still have high intelligence eventually, and are still made in the image of God and ultimately will be much more advanced than any animals including apes. (3 marks)</p> <p>“B thinks humans are more valuable than animals. This is because humans are made in image of God and rational and much more advanced than any animal. So he will oppose experiments on embryos.” (2 marks)</p> <p>“B values people not animals so he will be against the experiments” (1 mark)</p>	
Section A Total		[20]

Section B Thinking to a conclusion based on reasons and evidence		
Question Number	Answer	Max Mark
15	<p>In Documents 2A and 2B both Ben and Anita present the issue of animal experiments as if there are only two options: either ban all animal experiments or allow all animal experiments.</p> <p>Describe in detail one other option that the law could adopt on this issue.</p> <p>Credit one mark for a partial or vague description of an alternative option.</p> <p>Examples</p> <p>“The law should only allow experiments on some animals and not others” (1 mark)</p> <p>“The law should only allow useful experiments on animals” (1 mark)</p> <p>Credit two marks for providing a full and explicit description of one alternative option.</p> <p>Examples</p> <p>“ The law should not allow experiments on higher primates/on apes but allow experiments on rodents/lower animals/more primitive animals” (2 marks)</p> <p>“The law should permit experiments on animals when those experiments will save human lives/lead to a cure for life threatening illnesses but not for pure research”</p> <p>(2 marks)</p>	[2]
16	<p>In Document 2B it is pointed out that Priya’s grandmother has Parkinson’s disease.</p> <p>Briefly explain how this may influence Priya’s views on animal experiments.</p> <p>Credit one mark for any explanation which proposes a possible link between this and being favourable towards animal experiments but does so in a manner which is overblown and overstated and lacking in appropriate qualifications.</p> <p>e.g. fails to distinguish between views on medical experiments and other kinds of experiments and doesn’t acknowledge that any such link is not necessary.</p> <p>Examples</p> <p>“She will probably be against restrictions on all animal experiments” (1 mark)</p> <p>“She will be biased in favour of animal experiments” (1 mark)</p> <p>Credit two marks for any explanation which proposes a possible link between this and being favourable towards animal experiments but does so in a manner which is precise (distinguishing between experiments for medical purposes and for other purposes) and is suitably qualified.</p> <p>Examples</p> <p>“She may favour allowing experiments on animals for the purposes of medical research but not for all purposes” (2 marks)</p> <p>“She may have a bias in favour of allowing animal experiments for medical research purposes” (2 marks)</p>	[2]

Section B Thinking to a conclusion based on reasons and evidence		
Question Number	Answer	Max Mark
17	<p>Using the information in the Documents identify and state four claims which could be used as evidence or reasons in support of allowing medical experiments on higher primates like the great apes.</p> <p>Credit one mark for any precise claim which could be used to support an argument for medical experiments on apes. No mark is to be awarded for imprecise vague generalities.</p> <p>Examples</p> <p>“Apes are genetically very close to humans” (1 mark) “Apes have a brain structure which is very close to that of humans” (1 mark) “Apes are very similar to humans because they are intelligent like us” (1 mark) “Apes are very similar to humans because they are sociable like us” (1 mark) “Apes are very similar to humans” (0 mark)</p>	[4]
18	<p>Using some of the claims you identified in question 17, present and develop a brief argument in favour of allowing medical experiments on great apes.</p> <ul style="list-style-type: none"> You must clearly identify your main conclusion. You must provide reasons for your main conclusion. You must support at least one reason with relevant evidence or examples. <p>Marks are to be allocated in accordance with the performance descriptors below.</p> <p>The content for the arguments may be borrowed from the documents or may be independent of those documents.</p> <p>Performance descriptions for 7 to 10 marks:</p> <ul style="list-style-type: none"> The conclusion is both precise and clearly stated <p>Examples of a precise and clearly stated conclusion include:</p> <p>“Therefore carefully regulated experiments should be allowed on great apes when there are clear medical benefits to humans”</p> <p>“Consequently it follows that medical experiments should be legally permitted in limited circumstances when the benefits cannot be gained any other way.</p> <p>“I want to argue that some experiments on great apes should be allowed but only when there are no other alternatives and the benefits to humans are huge”</p>	[10]

Section B Thinking to a conclusion based on reasons and evidence		
Question Number	Answer	Max Mark
	<ul style="list-style-type: none"> Reasons are provided for the conclusion, which are persuasive, cogent and fully developed. <p>Examples of reasons which are fully developed include:</p> <p>“The great apes are so close to humans especially with respect to their brain structure that experiments on their brains can be an invaluable source of information about our own brains.”</p> <p>“Information from experiments on great apes can be used to help doctors to find cures for serious problems which make the lives of the sufferers and their families so unhappy.”</p> <p>“It is very unlikely that an understanding of something as complex as a human brain could come from any source other than experimenting on similar brains.”</p> <ul style="list-style-type: none"> The structure of the reasoning is clear and explicit and places minimal reliance on assumptions. <p>Example of reasoning where structure is clear and explicit include:</p> <p>“There are three main reasons for this. Firstly this is because the great apes are so close to humans especially with respect to their brain structure that experiments on their brains can be an invaluable source of information about our own brains. Secondly this information can then be used to help doctors to find cures for serious problems which make the lives of the sufferers and their families so unhappy. Thirdly and finally it is very unlikely that this level of understanding of something as complex as a brain could come from any other source.”</p> <ul style="list-style-type: none"> Evidence and examples are provided which are both relevant and clearly strengthen the reasoning. <p>Examples of evidence and examples which are relevant and clearly strengthen reasoning include:</p> <p>“The supporters of the Great Ape Project quoted in Document 5 provide evidence for this in emphasising the similarity between the brains of apes and humans”</p> <p>“For example senile dementia not only harms the quality of life of the person who suffers but also places a great burden on other family members who have to act as carers”</p> <p>“Professor Aziz in Document 8 is an expert in these areas and he is convinced that work on primate brains was necessary for his own discoveries”</p>	

Section B Thinking to a conclusion based on reasons and evidence		
Question Number	Answer	Max Mark
	<ul style="list-style-type: none"> Grammar, spelling and punctuation are good. <p>Performance description for 4 to 6 marks:</p> <ul style="list-style-type: none"> The conclusion is clearly stated but lacks precision in the form of careful qualification <p>Examples of a clearly stated but unqualified conclusion include:</p> <p>“So it is right to experiment on apes”</p> <p>“Therefore it follows that there is nothing wrong with experiments on apes”</p> <p>“I want to argue that experiments on apes should be legalised”</p> <ul style="list-style-type: none"> Reasons are provided for the conclusion, which are plausible and relevant. <p>Example of plausible, relevant but undeveloped reasons include:</p> <p>“Great apes have brains like ours”</p> <p>“Great apes are closely related to us”</p> <p>“Great apes share 99% of our DNA”</p> <p>“Great apes are only animals, not people”</p> <ul style="list-style-type: none"> The structure of the reasoning is not fully explicit, indicator words are infrequent, and does rely on some assumptions. <p>Example of reasoning where the structure is not fully explicit and relies on some assumptions:</p> <p>“Animal experiments do work and do lead to useful cures. Great apes are even more like us than monkeys. They have the same DNA as us. They have brains like ours and they behave a lot like us. So we should experiment on great apes.”</p> <ul style="list-style-type: none"> Evidence and examples are provided which are relevant but are open to challenge. <p>Example of evidence which though relevant is open to challenge:</p> <p>“For example the experiments on monkeys by Professor Aziz produced a cure for Parkinson’s disease. “</p>	

Section B Thinking to a conclusion based on reasons and evidence		
Question Number	Answer	Max Mark
	Grammar, spelling and punctuation are adequate.	
	<p>Performance description for 1 to 3 marks</p> <ul style="list-style-type: none"> The conclusion is imprecise and unclear; there may be several different candidates for the conclusion no one of which is clearly identifiable as the conclusion <p>Example of imprecise and unclear conclusion:</p> <p>“There is nothing wrong with experimenting on them or on other animals. We need to find cures for diseases like Alzheimer’s and the sooner the better! People are more important than animals! “</p> <ul style="list-style-type: none"> Reasons are undeveloped and only provide weak support for their conclusion. <p>Example of reasons which are undeveloped and only weakly support the conclusion</p> <p>“Great apes don’t speak and they don’t live in cities or drive cars”</p> <p>“People are more important than animals”</p> <p>“We need to find cures for diseases like Alzheimer’s”</p> <ul style="list-style-type: none"> Structure is either absent or minimal or unclear. <p>Example of reasoning where structure is either absent or minimal or unclear</p> <p>Great apes don’t speak and they don’t live in cities or drive cars. There is nothing wrong with experimenting on them or on other animals. We need to find cures for diseases like Alzheimer’s. People are more important than animals. Experiments on animals led to the discovery of penicillin.</p> <ul style="list-style-type: none"> Evidence and examples are poorly developed or explained and are open to obvious counter examples and objections <p>Example of evidence which is poorly developed and open to objections:</p> <p>“Experiments on animals led to the discovery of penicillin.”</p> <ul style="list-style-type: none"> Grammar, spelling and punctuation may be inadequate. 	

Section B Thinking to a conclusion based on reasons and evidence		
Question Number	Answer	Max Mark
	<p>0 marks – no creditworthy material either rant or purely descriptive or combination of both but no attempt to reason towards one conclusion</p> <p>Example of no creditworthy material:</p> <p>“The UK government banned animal experiments on great apes. The great apes differ from human beings by only 1% of their DNA. Scientists support experiments on great apes but some stupid people do not”</p>	
19	<p>Complete the following sentence so as to provide one brief counter argument: But some people claim that experiments on great apes should not be allowed because...</p> <p>Credit 2 marks for any precise and developed reasoning which supports the counter assertion Example “it is wrong to experiment on living things which are intelligent social creatures and the great apes are intelligent and social creatures”</p> <p>Credit 1 mark for one undeveloped reason which could support the counter assertion Example “it is wrong to experiment on living things which are intelligent social creatures” or “ the great apes are intelligent and social creatures”</p> <p>0 marks – no creditworthy material</p> <p>Example</p> <p>“they are stupid”</p>	[2]
Section B Total		[20]
Paper Total		[60]

Assessment Objectives Grid (includes QWC)

Question	AO1	AO2	AO3	Total
1	4			4
2	3			3
3	1			1
4			10	10
5	1			1
6	4			4
7	1	2		3
8		1		1
9		3		3
10	2			2
11			3	3
12	1			1
13	1			1
14		3		3
15		2		2
16		2		2
17	4			4
18			10	10
19	2			2
Totals	24	13	23	60

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