

Critical Thinking

Advanced GCE A2 H450

Advanced Subsidiary GCE AS H050

Mark Schemes for the Units

January 2010

H050/H450/MS/R/10J

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of pupils of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, OCR Nationals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by Examiners. It does not indicate the details of the discussions which took place at an Examiners' meeting before marking commenced.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the Report on the Examination.

OCR will not enter into any discussion or correspondence in connection with this mark scheme.

© OCR 2010

Any enquiries about publications should be addressed to:

OCR Publications
PO Box 5050
Annesley
NOTTINGHAM
NG15 0DL

Telephone: 0870 770 6622
Facsimile: 01223 552610
E-mail: publications@ocr.org.uk

CONTENTS

Advanced GCE Critical Thinking (H450)

Advanced Subsidiary GCE Critical Thinking (H050)

MARK SCHEMES FOR THE UNITS

Unit/Content	Page
F493 Resolution of Dilemmas	1
F494 Critical Reasoning	16
Grade Thresholds	30

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 has good reason against it.**

Assessment by Specification

		Qn 1	Qn 2	Qn 3	Qn 4
5.3.1	Understand and apply the language of reasoning				✓
	Clarify expressions and ideas	✓			
	Recognise and evaluate different kinds of claim	✓		✓	✓
	Recognise and evaluate special kinds of reasoning			✓	✓
5.3.2	Assess arguments		✓	✓	✓
	Understand, interpret and draw conclusions from forms of statistical and numerical representation appropriate to informed citizens		✓		
	Develop and present relevant arguments			✓	✓

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 mark scheme.

Question	AO1	AO2	AO3	Total
1	2	2	4	8
2	4	2	2	8
3		12	12	24
4a		2	2	4
4b	2	8	26	36
Total	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 4
total for question 1 ringed and transferred to cover.
- 2 two numbers between 0 and 4
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:

C	Reference to Criterion
EC	Evaluation of Criterion
D	Relevant use of Document
E	Evaluation
ED	Evaluation of Document
P	Use of principle
Q	Quality of argument
R	Resolution of dilemma

Quality of Argument

IC	Intermediate conclusion
HA	Hypothetical argument
CA	Counter-argument
RCA	Response to counter-argument
An	Analogy
Ex	Example
Ev	Evidence

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

Question 1**8 marks** [AO1 = 2; AO2 = 2; AO3 = 4]

- a) Document 3 describes a policy of presumed consent. Suggest and briefly explain one problem in implementing such a policy. [4]
- b) Document 4 describes a policy of payment for organ donation. Suggest and briefly explain one problem in implementing such a policy. [4]

For each 4-mark question:

2 marks for clearly identifying a problem

1 mark for identifying a vague or marginally relevant problem

0 for nothing worthy of credit.

and

2 marks for a clear explanation

1 mark for a vague or marginally relevant explanation

0 for nothing worthy of credit.

Partial Performance:

1 mark for a valid objection to the policy, which is not developed into a problem of implementation.

Indicative content

a)

If the absence of refusal is construed as constituting consent, there is no way of knowing whether that consent is informed or not.

It is doubtful whether people own their own bodies after death or whether ownership passes to the next of kin, in which case the wishes of the deceased cease to be relevant.

Doc 3 para 2 implies that relatives might still refuse their consent.

It would be too easy for people's withdrawal of consent to be lost or otherwise unavailable at the crucial moment.

Medical staff might be tempted to "lose" withdrawals of consent.

b)

Donors who urgently need money for themselves or their family might give consent under duress because they feel unable to refuse an offer of money for an organ.

A system of private purchase would be unfair to those who could not afford to buy an organ.

A system of purchase by hospitals would add further costs to the NHS budget.

Other valid answers should be accepted.

Since the question asks for "problems", positive evaluative comments must **not** be credited.

Example of 1-mark problem (b):

Entrepreneurs who negotiate between donor and patient are motivated by financial gain.

Question 2**8 marks** [AO1 = 4; AO2 = 2; AO3 = 2]**Refer to Document 3.****Suggest and briefly explain two problems in using the statistics in the last paragraph of Document 3 to support a policy of presumed consent.****[8]**

For each answer:

4 marks for identifying a relevant problem, referring to the Document and giving a developed explanation.

3 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.2 marks for identifying a relevant problem and **either** referring to the Document **or** giving an undeveloped or vague explanation.

1 mark for identifying a relevant problem.

0 for nothing worthy of credit.

Indicative content

The fact that the waiting list rises by 8% annually would indicate the size of the problem only if we knew various other pieces of information, including the amount of the shortfall and the trend of donations.

It is not stated whether the 8% refers to the UK or the world. If it is not the UK, the statistic gives less support to changing the policy in the UK.

The fact that Spain has more donors than the UK could be caused by the proposed system or by various other possible reasons (implied causal fallacy).

In the absence of comparative information about the populations of the two countries, it is unclear what “three times more” means: three times pro rata for the population? a similar proportion of a larger population? three times higher despite a smaller population?

Statistics do not address the ethical issues raised by the policy.

Statistics do not explore the issue whether all people who need an organ transplant deserve one.

Other valid answers should be accepted.

1 mark:

The source of these statistics is not stated.

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

Select **one** of the choices given in the Choices box. Evaluate this choice as a course of action for the Government in response to the shortage of organs for transplant. You should refer closely and critically to **at least three** of the criteria given in the Criteria box and to the evidence in the Resource Booklet.

[24]

Mark by levels, according to the following table. 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.

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
L4: 19-24	<ul style="list-style-type: none"> • Sound and perceptive application of at least 3 criteria to one of the listed choices. • Firm understanding of how criteria might support and weaken the case for the selected choice and/or some evaluation of criteria. 	<ul style="list-style-type: none"> • Perceptive, relevant and accurate use of resource material. • Sustained and confident evaluation of resource material. 	<ul style="list-style-type: none"> • Cogent and convincing reasoning, very well structured to express/ evaluate complex ideas/materials. • Few, if any, errors of spelling, grammar, punctuation.
L3: 13-18	<ul style="list-style-type: none"> • Clear understanding of how at least 3 criteria might support and/or weaken the case for one of the listed choices or clear understanding how 2 criteria might support and weaken the case for one of the listed choices and/or some evaluation of criteria. 	<ul style="list-style-type: none"> • Relevant and accurate use of resource material. • At least some evaluation of resource material. 	<ul style="list-style-type: none"> • Effective and persuasive reasoning. • Some clarity in expression of complex ideas. • Relatively few errors of spelling, grammar, punctuation.
L2: 7-12	<ul style="list-style-type: none"> • Basic understanding of how at least 2 criteria might support and/or weaken support for one of the listed choices or clear understanding how 1 criterion might support and weaken the case for one of the listed choices. 	<ul style="list-style-type: none"> • Relevant and accurate use of resource material. 	<ul style="list-style-type: none"> • Basic presentation of reasoning, including relevant points and conclusion(s). • Written communication fit for purpose, but containing significant errors of spelling, grammar, punctuation.

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
L1: 1-6	<ul style="list-style-type: none"> At least one criterion applied to a choice or to the issue in a limited/simplistic manner. 	<ul style="list-style-type: none"> Very limited, perhaps implicit, use of resource material. 	<ul style="list-style-type: none"> Reasoning is sketchy and unstructured. Communication may lack coherence and contain significant errors in spelling, punctuation and grammar.
L0: 0	<ul style="list-style-type: none"> No application of criteria to issue. 	<ul style="list-style-type: none"> No use of resource material. 	<ul style="list-style-type: none"> No discernible reasoning.

Maximum level 1 overall if criteria are not used to evaluate a choice.

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

Quality of Argument

Typical indicators of Level 3 are

- use of intermediate conclusions
- use of hypothetical reasoning.

Consistent and well-supported use of intermediate conclusions and/or hypothetical reasoning is an indicator of level 4.

In addition to the indicators of Level 3, typical indicators of Level 4 are some of:

- use of relevant counter-argument with persuasive response
- use of relevant analogy
- use of relevant examples or evidence.

Indicative content

Make “transplant tourism” a criminal offence

Because many of the people who would be prevented from travelling to foreign countries to buy organs for transplant would die, or at least remain ill, this option fails the criterion of health (although the poor people who might have donated organs might be healthier). Some people would claim that by eliminating wealth as grounds for the provision of organs, this option would satisfy the criterion of justice, but others would argue that an aspect of justice is to be free to spend one’s money on ways of improving one’s life. Freedom of choice of both donors and recipients would be compromised by this choice. By drastically reducing the number of people who buy organs from people in poor countries, this option satisfies the criterion of welfare of donors by protecting them from exploitation, but at the same time detracts from the welfare of donors by depriving them of an opportunity to earn money which may be essential to their survival. This would be a difficult and therefore costly option to implement, since it would be equally difficult to prevent people from travelling abroad to receive a transplant and to punish them on their return.

Change the law so that consent for use is presumed unless the patient has opted out.

By greatly increasing the number of organs available, this option would satisfy the criterion of health. The inclusion of a right to opt out would go some way towards meeting the criterion of justice, although it seems likely that the organs of many people who did not consent to their use would be removed and used in transplants after death, which is probably unjust and would also infringe the criterion of freedom of choice. This option may detract from the welfare of donors, although since they would be dead it may be that their welfare does not count; it is sometimes alleged (although not in any of these documents) that less strenuous efforts are made to save the lives of potential donors than those whose organs will not be of use. This option would require a thorough programme of record-keeping, which would cost something, but it could be done.

Encourage poorer countries to set up a scheme to pay people for donating organs.

Insofar as this option would enable some people to obtain organs for transplant who would otherwise remain sick or die, it satisfies the criterion of health, but not as much as a scheme which allocated organs by reference to clinical considerations only. By ensuring that live donors were fully compensated for the inconvenience, pain and risk which they would undergo, this option satisfies the criterion of justice, but this argument is much weaker in the case of after-death donation. Institutionalising “transplant tourism” in this way offends against the criterion of justice, by enabling rich people to have greater access to organs for transplant. Another way in which this option would offend against the criterion of justice is by seeking organ donation from people in poor countries rather than the country of the recipient. This option satisfies the criterion of freedom of choice in relation to both donors and recipients. The welfare of donors is the criterion used in Document 1 in favour of this option, on the grounds that poor people need the money and that they are being exploited by the current unregulated practice of paid donation; some people, however, would argue that poor donors would still be exploited by this scheme. Depending on what form the encouragement took, this choice may involve some cost.

Allow individual recipients to pay people for donating organs in the UK.

By increasing the supply of organs for transplant, this option satisfies the criterion of health, albeit not as much as a system whereby allocation of organs was decided on purely clinical grounds. It could be argued that for wealthy people to be free to spend their money on ways of improving their life is an aspect of justice, but many people would say that allowing people access to organs on the basis of ability to pay would offend against this criterion. By allowing the sale and purchase of organs in this country, this option would greatly reduce the incidence of “transplant tourism”, and would thereby both satisfy the criterion of welfare of poor overseas donors by protecting them from exploitation and also detract from their welfare by depriving them of an opportunity to earn money. If relatively poor people in the UK would be the most likely to volunteer under this scheme, it could be seen as helping or exploiting them; after-death donations would satisfy the criterion of the welfare of donors better than live donations. This would be the cheapest of all the options to implement, requiring no public expenditure for administration or enforcement.

Allow hospitals to pay people for donating organs in the UK.

Of all the options identified, this one most fully satisfies the criterion of health, by increasing the number of organs available and allocating them by reference to clinical considerations only. Compensating living organ donors for the inconvenience, pain and risk which they undergo satisfies the criterion of justice, but this case is much weaker in the case of after-death donation. Most people would probably say that by eliminating wealth as grounds for the provision of organs, this option would satisfy the criterion of justice, but others might claim that an aspect of justice is to be free to spend one's money on ways of improving one's life. It would reduce the phenomenon of “transplant tourism” to some extent, but wealthy patients who failed to meet clinical criteria for receipt of an organ would probably still travel to poorer countries where the welfare of poor donors would be simultaneously enhanced (by allowing them to earn money)

and harmed (by exploiting their poverty). If relatively poor people in the UK would be the most likely to volunteer under this scheme, it could be seen as helping or exploiting them. In addition to the cost of the fees paid to donors, this option would be expensive to administer.

Example of L4 answer (235 words)

Change the law so that consent for use is presumed unless the patient has opted out. This choice is supported by Document 3, but the argument in that doc is weakened by including contradictions (eg in para 4). Although the article includes opinions opposing the idea, they are weakly argued: so overall the article is somewhat biased in favour of the proposal.

If this choice would greatly increase the number of organs available, as both Documents 3 and 4 imply, it would satisfy the criterion of health, but the scale of benefit is doubtful because of the contradiction attributed to Gordon Brown in para 4 of Doc 3 and because of the uncertainty relating to the statistics in the final para.

The inclusion of a right to opt out would go some way towards meeting the criterion of justice, although it seems likely that the organs of many people who did not consent to their use would be removed and used in transplants after death, which is probably unjust and would also infringe the criterion of freedom of choice. Doc 4 implies that this option would fail to meet the criterion of freedom of choice, but since this is an Opinion article, the author may have a vested interest to present a one-sided argument.

This option may detract from the welfare of donors, although since they would be dead this is quite a weak criterion.

Evaluation of Resource Documents: Indicative Content for Use in Qns 3 and 4b*Document 1*

The Independent has a good reputation as a quality newspaper. By describing Professor Noorani as “one of Britain’s leading transplant surgeons”, the newspaper is attributing reputation and expertise to him: if this is justified, then the appeal to authority is a valid one. The fact that he was formerly a transplant surgeon at a leading London hospital implies good reputation and expertise. Likewise, the title “Professor” implies expertise. Paras 2 and 3 state that the Professor has very good ability to see. The report does not attempt to be neutral, but is reporting a particular proposal. The newspaper has a vested interest to present the story fairly, and no vested interest not to do so. Professor Noorani may have a vested interest to argue in favour of his proposal, eg if he would personally profit from it. The argumentation in para 5 is weak and needs to be supported by evidence. The reason given in para 6 for not introducing payment of UK donors is too vague to be assessed.

Document 2

No evidence is given concerning the credibility of the “In the News” website, but it is likely to have expertise and good ability to see. The CEO of the Human Tissue Authority presumably has good reputation, and ability to see; whether he has good expertise or not depends on whether he is a professional or a manager (the fact that he does not use the title Dr may imply he is not medically qualified). The academic affiliation of Dr Francis Delmonico at a top American university and his title Dr strongly imply that he has a good reputation, expertise and ability to see. Although he has a vested interest to encourage the supply of organs for transplant, he actually argues the other way, which enhances his credibility. The concerns expressed in para 3 are vague and not supported by evidence. The appeal to authority and popularity in para 4 is probably true, despite not being backed up by evidence.

Document 3

The Times has a good reputation as a quality newspaper, although it is also known to have a vested interest to support its proprietor’s business ventures. The patients’ groups have a vested interest to draw attention to any ways in which patients might be disadvantaged by new policies. The report is quite neutral, summarizing both sides of the argument. The views attributed to Gordon Brown are not entirely consistent, but it is not clear whether the inconsistency is his or was created by the reporter. The quality of argumentation in this article itself and in the sources it cites is poor.

Document 4

The Daily Telegraph has a good reputation as a quality newspaper, with particular sympathy for Conservative politics, but this document is presented as an “opinion” and is therefore under no obligation to be neutral or even to be consistent with the political stance of the newspaper itself, although in fact the document’s defence of private finance and suspicion of political control are congenial to the proprietor and readers of the paper. Since the identity of the author is not stated, few clues as to his credibility are available.

Question 4 (a) 4 marks [AO2 = 2; AO3 = 2]

- (a) In response to the shortage of organs for transplant, the Government has to decide whether to allow organ donors to be paid or to continue to rely on unpaid volunteers. Explain why this decision is a dilemma.

[4]

- 1 mark for stating that a dilemma is a choice in which each alternative has good reasons against it and/or that it is impossible to choose both option or neither.
 0 mark for failing to state this explicitly.

+

- 3 marks Clear statement of undesirable consequences of both alternatives
- 2 marks Clear statement of benefits of **both** alternatives
or
 Clear statement of benefits **and** undesirable consequences of **one** alternative
or
 Clear statement of undesirable consequences of **one** alternative
or
 Vague statement of benefits/undesirable consequences of **both** alternatives
- 1 mark Vague statement of benefits/undesirable consequence of **one** alternative
- 0 Nothing creditable

Indicative Content

In this examination, a dilemma is understood as a situation where a choice must be made between mutually exclusive options, each of which has good reasons against it. In some cases, these undesirable consequences consist of failing to achieve the benefits of the alternative.

There are several disadvantages of paying organ donors. The pressure it might put on poor people to sell an organ is one disadvantage. In a private scheme, disadvantages would include the cost to patients or their well-wishers and the unfairness on patients who could not afford to buy an organ. If organ purchase were undertaken by the NHS, the disadvantages would consist of the additional cost to public funds and the consequent need to raise taxes.

The disadvantages of continuing to rely on unpaid volunteers are that it fails to attract enough donors and (in the case of live donors) that people are not being recompensed for their loss and the risk and inconvenience which they undergo.

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**
- **support your argument with critical use of the evidence in the Resource Booklet.**

[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.

Candidates may concentrate their discussion on live donation or after-death donation or may consider both.

Since the dilemma as stated does not mention whether a scheme for payment would be funded by individuals or the NHS, candidates may focus their discussion on either or both of these possibilities.

Quality of Argument

Typical indicators of Level 3 are

- use of intermediate conclusions
- use of hypothetical reasoning.

Consistent and well-supported use of intermediate conclusions and/or hypothetical reasoning is an indicator of level 4.

In addition to the indicators of Level 3, typical indicators of Level 4 are some of:

- use of relevant counter-argument with persuasive response
- use of relevant analogy
- use of relevant examples or evidence.

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
L4: 28-36	<ul style="list-style-type: none"> Confidently-expressed resolution of a clearly-focused dilemma on the basis of a persuasive account of the arguments in favour of both sides. Perhaps an awareness that the resolution is partial/provisional. Clear and valid judgments made in coming to an attempted resolution. 	<ul style="list-style-type: none"> Skilful and cogent treatment and application of at least 3 principles or at least 2 major ethical theories. Clear and purposeful exposition of how the principles might be more or less useful in resolving the dilemma. 	<ul style="list-style-type: none"> Perceptive, relevant and accurate use of resource material. Sustained and confident evaluation of resource material. 	<ul style="list-style-type: none"> Cogent and convincing reasoning. Well-developed suppositional reasoning. Communication very well suited to handling complex ideas. Meaning clear throughout. Frequent very effective use of appropriate terminology. Few, if any, errors in spelling, grammar and punctuation.
L3: 19-27	<ul style="list-style-type: none"> Generally confident and developed treatment of a sufficiently focused dilemma. Some awareness of the arguments in favour of both sides of the dilemma. Clear indication of an attempt to resolve the dilemma, perhaps concluding that it cannot be resolved. 	<ul style="list-style-type: none"> At least 2 relevant principles accurately identified, explained and applied. Clear exposition of how the principles might be more or less useful in resolving the dilemma. 	<ul style="list-style-type: none"> Relevant and accurate use of resource material. Some evaluation of resource material. 	<ul style="list-style-type: none"> Effective and persuasive reasoning. Some suppositional reasoning. Clear and accurate communication. Frequent effective use of appropriate terminology. Few errors in spelling, grammar and punctuation.

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
L2: 10-18	<ul style="list-style-type: none"> At least a basic understanding that a dilemma involves making difficult decisions involving unfavourable consequences whatever is decided or a basic discussion of the issue not expressed as a dilemma. 	<ul style="list-style-type: none"> At least 2 relevant principles identified or a well-developed discussion of 1 principle. Basic application of principles to the dilemma/issue. 	<ul style="list-style-type: none"> Relevant and accurate use of resource material. 	<ul style="list-style-type: none"> Limited ability to combine different points of view in reasoning. Perhaps some suppositional reasoning. Some effective communication. Some use of appropriate terminology. Fair standard of spelling, grammar, punctuation, but may include errors.
L1: 1-9	<ul style="list-style-type: none"> Limited discussion of the issue. Little or no awareness of what is meant by a dilemma. 	<ul style="list-style-type: none"> Some attempt to identify at least one principle and to apply it to the dilemma/issue. 	<ul style="list-style-type: none"> Very limited, perhaps implicit, use of resource material. 	<ul style="list-style-type: none"> Limited ability to produce coherent reasoning. Little evidence of effective use of specialist terminology. May contain significant errors in spelling, punctuation and grammar.
L0: 0	<ul style="list-style-type: none"> No discussion of the issue. 	<ul style="list-style-type: none"> No use of principles. 	<ul style="list-style-type: none"> No use of resource material. 	<ul style="list-style-type: none"> No discernible reasoning.

Maximum of Level 1 overall if principles are not used.

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

To achieve L3 or above for “Treatment of a relevant dilemma”, candidates must **both** give at least one argument in favour of each side of the dilemma **and** attempt a resolution. In relation to some issues, it is easy to argue in favour of both sides, but harder to attempt to resolve the dilemma; in other cases, candidates may find it easy to make a choice, but harder to defend more than one side.

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

The difficulty in this case is to find principles which can be applied to **oppose** paying organ donors.

Credit must be given to any argument based on a principle in the sense outlined in the preceding notes. Such principles include:

- The duty of medical professionals to try their utmost to preserve the lives and health of their patients would appear to support any policy which would increase the number of organs available for transplants.
- The principle of fairness suggests that donors should be paid, but it probably also implies that sick people from the same country as the donor should have priority over foreigners. The principle of fairness could be used to oppose a scheme allowing individuals who could afford it to buy organs, but this would not apply to a scheme whereby the NHS met the cost and organs were allocated by reference to clinical criteria.
- The general duty to protect the vulnerable from being exploited has been cited (eg twice in Document 2) as a reason for not paying organ donors, but this seems to imply that it is better to starve to death than to be exploited by rich people, which may be considered counter-intuitive. Furthermore, it is doubtful that people who accept payment in exchange for after-death donation are being exploited.
- Altruism is the main principle which would encourage people to give organs without being paid, but this does not necessarily imply that payment should not be made to donors who need it or who would not make their organs available without payment.

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

As in most issues, 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”. Any scheme which increases the number of organs available for transplant is likely to satisfy this criterion. Living donors do suffer some harm when they sell – eg – a kidney, but they and their families gain from the payment. In the case of after-death donation, it seems that everyone gains.

Dilemmas relating to this subject can also be expressed as a conflict of rights. Candidates may set the rights to life and to healthcare of patients over against the right to bodily integrity of prospective donors. Payment would be an ethical way of resolving this conflict.

The strict form of the first version of Kant’s Categorical Imperative, “Act according to that maxim which you can will to be a universal law”, would rule out organ donation from living donors, on the grounds that it would be self-contradictory to want everyone to donate their organs to everyone else, but it would support after-death donation; it does not appear to have any light to shed on the specific issue of payment. The second version, that we should always treat persons as ends, and not as means only, strongly supports the principle that organ donors should be paid.

The content of any appeal to Divine Command ethics would vary according to which religion such commands were drawn from, but most religions accept such principles as love for the neighbour and the duty to protect the vulnerable from exploitation, which imply that organ donation should be unpaid. Judaism and Islam at first opposed transplant surgery, but mostly now accept it.

Natural Law does not have much to say about the issue of payment, but tends to oppose transplants of organs from living donors, on the grounds that it constitutes mutilation. However, the principle of survival could be used in favour of transplantation, especially of organs donated after-death.

Behind the Rawlsian Veil of Ignorance, one would not know whether one would be a desperately ill patient or a prospective organ donor (or a tax-payer; and the patient may be rich or poor). On that basis, it would be rational to approve of a scheme of payment.

Example of L4 answer (546 words)

Altruism (the principle that people should act unselfishly for the benefit of others) is the main principle which would encourage people to give organs without being paid, and this principle is supported by Divine Command ethics. However, this principle does not necessarily imply that payment should not be made to donors who need it or who would not make their organs available without payment. The claim in Document 1 that payment to donors in the UK would “tarnish the whole process” is too vague to be taken into account.

The principle that medical resources should be allocated on the basis of need rather than ability to pay (derived from the principle of fairness) would support a scheme whereby hospitals, rather than patients, could pay donors for organs. Doc 4 suggests that this could be as unfair as a system allowing individuals to pay, but no evidence is offered in support of this opinion; furthermore, this opinion may be biased because the Daily Telegraph would generally favour benefiting rich people and oppose bureaucratic national schemes.

The second version of Kant's Categorical Imperative, that we should always treat persons as ends, and not as means only, could support a policy of paying organ donors, since payment is in many everyday situations the way in which we indicate that those who serve us are not being treated as means only. However, it could also be argued that volunteers have greater dignity than those who are paid. Using someone's dead body as a source for organs treats the body, but not the person, as a means (only).

Utilitarianism seeks to maximise the welfare of as many people as possible. It is almost certain that paying donors would produce the greatest overall benefit, since it would increase the number of successful transplant operations and the fees paid would benefit those who received them. Para 3 of Doc 4 argues persuasively that payment would increase the number of organs made available. These benefits would far outweigh the cost to taxpayers (or individual patients) and any distress caused to any relatives by the mutilation of someone's body. Paying live donors might cause poor people to be exploited (as suggested by Doc 2 in relation to overseas donors), but this is a remote danger in the case of after-death donation.

Behind John Rawls's Veil of Ignorance, one would not know which position one would take in relation to such cases. Rich, desperately ill patients would approve of being able to buy an organ. Poor, desperately ill patients would want a hospital to be able to buy an organ on their behalf. Prospective organ donors would probably like to be paid, and could presumably refuse payment if they felt it would spoil the quality of their gift. Some tax-payers might resent any increase in the cost of the NHS, but most would probably be willing to bear their small share of the cost in order to save lives. Overall, there can be little doubt that this approach favours allowing the NHS to pay donors.

The case for payment is overwhelming. Most ethical theories lead to this conclusion. The value of altruism could be incorporated into a policy by encouraging unpaid voluntary donations while paying donors who need the money or would not donate without payment.

F494 Critical Reasoning

	Name	Type	Key
1	National Food	Which is an argument?	D
2	Valid 1	Which is valid?	A
3	Dogs of War	MC	D
4	Dogs of War	Weakness	B
5	Dogs of War	Principle counter argument	A
6	Diseases	Identify Element	C
7	Diseases	Identify element	A
8	Diseases	Weakness	B
9	Magazine	Pattern of reasoning	B
10	Science	Identify elements	C
11	Science	Assumption	A
12	Women prefer brains	Use of evidence to support claim	D
13	God obsolete	Argument from analogy etc?	D
14	Academic freedom	Inference	D
15	Academic freedom	Assumption	A
16	Academic freedom	Necessary / sufficient	B
17	Chimps	Evidence to support claim	C
18	Lemons	Evaluate argument	B
19	Music	MC	D
20	Music	Assumption	C

1 Which of the following is an argument?

Key D

Ex Take the example of fish and chips – frying is a Jewish way of cooking fish, and French *pommes frites* were probably around before British chips.

R Any dish has influences from all over the world.

C Specific dishes shouldn't be considered to have any particular nationality.

A First sentence states a 'fact' (which is probably wrong). Second sentence attempts to explain this (it certainly does not support it). Third sentence reports what happened next.

B Two sentences which tell the history of ice cream (with some opinion but no support for it).

C Three logically unconnected statements about food and culture.

2 Which of the following is a valid argument?

Key A

Although it is factually inaccurate, the conclusion would be true if the reasons were true.

Questions 3, 4 and 5**Dogs of War**

- Context: Stray dogs are being airlifted from Iraq to the US to accompany US soldiers who have befriended them whilst on duty in Iraq.
- CA (C) In some ways this is an excellent idea, as (R) it seems harsh to abandon a dog after rescuing it from abuse and making friends with it.
- R The US has limited resources and
- R (P) these should be used to help people rather than animals.
- R Iraq is a dangerous place, and
- IC soldiers' lives are put at risk when they transport an animal to the airport.
- C the practice of airlifting stray dogs to the US should not be encouraged.

3 Which of the following is the main conclusion of the argument?**Key D**

The practice of airlifting stray dogs to the US should not be encouraged.

See analysis.

4 Which of the following, if true, most weakens the support for the conclusion?**Key B**

Pets befriended in a war zone often help soldiers to adjust back to normal life.

This gives a reason why airlifting pets is helping people rather than just helping the animals (and possibly avoiding costs relating to mental health issues for the soldiers).

- A Almost 50,000 signatures have been gathered in an online petition to save some of these army pets.
The popularity of a measure does not make it right.
- C Stray Iraqi dogs need a health check and programme of vaccinations on arrival in the US.
If anything, this might strengthen the argument.
- D US soldiers have rescued many abused animals while serving in Iraq.
This might strengthen the argument by showing that significant resources would be necessary to airlift all these animals back to the US.

5 Which of the following is a principle that would counter the argument?**Key A**

People should put right the harm that people have done to animals.

It is people's fault that the dogs are being abused / in a war situation with no families. So people have a duty to put this right. This would therefore weaken the argument that dogs should not be airlifted because people are more important than animals.

- B People's lives are more important than animals' lives.
This principle underlies the argument and strengthens it.
- C Soldiers are inevitably going to be at risk while they are in a war zone.
This weakens the claim but it is not a principle.
- D The consequences of abandoning pet dogs should be weighed against the consequences of airlifting them to the US.
This is likely to attract only the weakest. This is a methodology (used in unit 3) which neither strengthens nor weakens the argument.

Questions 6, 7 and 8**Diseases**

- CAss Although there is a common perception that new diseases are likely to emerge from undeveloped, swampy or jungly land,
- Ev Researchers collected reports of new infectious diseases from 1940–2004 and found that most of them were bacterial, with many of them emerging in rich countries.
- Ev Their study also showed that 60% involved pathogens that had jumped from animals to people.
- R Density of human population was the strongest predictor of where new infections would emerge,
- IC making disease a hidden cost of human economic development.
- C most new infections will develop in cities in developed countries

6 What is the function of this element in the structure of the argument?**Key C****7 What is the function of this element in the structure of the argument?****Key A****8 Which of the following explain why the conclusion that 'most new infections will develop in cities in developed countries' is not fully supported by the evidence?****Key B**

- i. shows that the argument moves from many to most (not strong) and also uses the past to predict the future (not 100% reliable).
- ii. shows why risk factors may be greater in less developed countries, which would be a reason why new diseases may develop in cities in less developed countries more than in rich countries.

- 9 Which of the following most closely parallels the reasoning used in the argument?**

The first argument works: If X, then not Y. Y is important. Therefore not X.

Key B

If I eat my cake now, I won't have it for later. I want it later, so I shouldn't eat it now.

If X, then not Y. I want Y (parallel to Y is important without using words and cueing right answer the wrong way). Therefore not X.

- A If I do my homework now, I won't have to do it later. I want to go out later, so I should do my homework now.
If X then not Y. Z, so X.
- C If I go to the cinema, I won't be in when my Uncle comes round. That's a shame, but he'll still be here when I get back, so I'll go anyway.
If X, then not Y. Not Y a shame, but Z. Therefore X.
- D If I take the dog for a long walk, I won't be able to watch my favourite programme on TV. But I really fancy a long walk, so I'll watch my programme on the iPlayer.
If X, then not Y. But I want X, therefore Y later.

Questions 10 and 11

Science

- 10 What is the function of this sentence in the structure of the argument?**

Key C

- 11 Which of the following is an assumption underlying the argument?**

Key A

- 12 Which of the following is a reason why the headline does not follow from the evidence in the passage?**

Key D

Expresses the weakness in the use of evidence, that an unrepresentative group has been used and a general conclusion drawn.

- A hints at unrepresentativeness but in the wrong area. The Frisbee playing was not intended to be representative of normal male activity, but to be useful as a guide to the physical and mental skills of the individual males.
- B hints at a false dichotomy between brains and brawn, but this is not what happens in the passage.
- C This is a disagreement with the strategy apparently used by women. It is not a reason why the headline does not follow from the evidence.

13 This analogy**Key D**

Suggests that scientific understanding and religious understanding are useful to people in different ways.

This analogy works by suggesting that God (religious understanding) still has a role even though science (scientific understanding) has arrived, in the same way as houses still have a role even though cars have arrived. Science does not fulfil the same needs / have the same functions or uses as God, just as cars do not fulfil the same needs / have the same functions or uses as houses.

- A highlighting the overlap between scientific understanding and religious understanding.
The analogy might allow for some overlap between the two – just as one can sleep in a car rather than a house, one might gain some understanding about the world from science rather than from God. However, the analogy certainly does not highlight this overlap. It focuses on differences between them which mean that one cannot replace the other.
- B highlighting the similarities between scientific understanding and religious understanding.
No, differences.
- C suggesting that neither scientific understanding and religious understanding is useful to people at all.
No – they are like cars and houses, both of which are useful.

Questions 14, 15 and 16**Academic freedom**

- Context: Today, new scientific ideas must go through a rigorous process of peer review, in which leading scientists decide whether new ideas are scientifically valid and whether they should receive funding.
- R A small number of top scientists in the twentieth century – (Ex) including Einstein, Planck, Fleming, Franklin, Crick and Watson - thrived in the academic freedom of their time.
 - R They developed theories which disagreed with the opinions of leading scientists of the time.
 - R These theories also did not seem useful.
 - R However, they led to lasers, nuclear power, biotechnology, computers and telecoms.
 - IC If today's rigid peer reviewing and funding policies had been in force these top scientists' key ideas would not have been funded.
 - A (IC) The peer review process does not generally support new ideas
 - IC Peer review works for the mainstream but excludes radical research.
 - IC This process of peer review is killing creative science.
 - A It is possible to know who will be the top scientists of the future
 - A Removing peer review would be sufficient to create academic freedom.
 - C We must therefore allow future top scientists to bypass the peer review process in order to ensure that they have the academic freedom to be creative.

14 Which of the following can be inferred from the argument?**Key D**

Peer review may be preventing the development of new ideas as important as those which led to lasers, nuclear power, biotechnology, computers and telecoms.

The passage clearly implies this.

- A If peer review had been in force for scientists like Einstein, we would not now have lasers, nuclear power, biotechnology, computers or telecoms.
This cannot be inferred. The passage says that they would not have got funding, but they may have found independent / private funding, or someone else may have had the necessary ideas.
- B It would have been better if peer review had prevented the development of dangerous technologies such as nuclear power and biotechnology.
This would counter the thrust of the argument.
- C No leading scientist has the imagination to understand and support creative new ideas which might lead to technologies as important as computers or lasers.
This is far too strong.

15 Which of the following is an assumption underlying the argument?**Key A**

(i) is assumed – see analysis.

- (i) It is possible to know who will be the top scientists of the future.
If it is not possible to accept this claim, then it is not possible to allow future top scientists to bypass peer review. So we must accept it in order to accept the conclusion.
- (ii) The peer review process does not support new ideas.
This is too strong and is contradicted by the passage.

16 According to the author, academic freedom is:**Key B**

He argues that academic freedom is necessary, but still wants to select people to be given academic freedom, which suggests that there are other criteria (perhaps natural creativity) which are also necessary. Freedom is therefore not sufficient.

17 This is**Key C**

The chimps in the experiment seem to be able to work out that an actor with his hands full is using his forehead because he can't use his hands. They also seem to be able to work out that hands are better for the job, so use their own hands. Watching the actor with empty hands they seem to be able to work out that the actor could use his hands, which would seem to be the best tool for the job, but isn't, so there must be some reason for using the forehead. We can't say they are certainly making this inference, however, and we can be fairly sure that they can't make rational inferences *just like people*. So this claim is too strong.

18 Which of the following is the most accurate evaluation of this argument?

Key B

Questions 19 and 20

Music

- CA Although most people assume that the world is exactly as they perceive it to be
R First one part of the brain extracts basic features such as pitch and spatial location.
R Then another part of the brain integrates these basic features into a perceptual whole.
R However, different sounds can give rise to the same patterns on the eardrum, and parts of the sound may be lost or masked by other noise.
IC So the brain has to fill the gaps with a calculated guess, or inference.
R We also have to include our expectations about what comes next in the music and our memories of what has gone before.
IC So the music we 'hear' is based on a breakdown of sounds we actually hear and our expectations of what we think we should be hearing.
A This mental image is not reality
C What we actually hear when we listen to music is not reality but a mental image constructed by the brain.

This is quite long but the structure of the argument is fairly simple. The processes of extraction and integration are done in different parts of the brain to reinforce the idea of the process of building up a representation of reality.

19 Which of the following is the main conclusion of the argument?

Key D

See analysis

- A Counter argument
B Intermediate conclusion
C Intermediate conclusion

20 Which of the following is an assumption underlying the argument?

Key C

Mental representations are not real.

The argument does assume that our mental constructions are not 'reality'. This may or may not be the case, but it does have to be assumed (I think).

- A Calculated guesses are not normally accurate.
They may be normally accurate – the point is that there is a process between the 'real' music and the person's perception which MAY interfere. So this does not have to be assumed.
B Ideas are the same as mental representations.
No.
D None of us constructs the same mental representations.
Not necessary for the argument.

Section B

21 **Name the following elements and briefly explain their function in the structure of the argument:**

One mark for the name, one mark for the explanation.

- (a) **Even the hand of a stranger reduces anxiety and that of someone with whom one has a close relationship is even more significant. (paragraph 7) [2]**

This is evidence (1 mark) taken from research which supports the claim that 'touch can have a profound effect on the brain' (1 mark) (which is used to show that 'Sykes finds some scientific underpinning which goes beyond placebo in many of the therapies she looks at.')

Accept: Example of *how* touch can have a profound impact on the brain.
(Do not accept example that supports the claim or example without accurate explanation).

- (b) **'You had to see Sykes's footage of hypnotism helping a woman to have teeth extracted without anaesthetic to believe it.' (paragraph 9) [2]**

Example (1 mark) of how (one particular) complementary therapy is effective at pain relief (1 mark).

Accept: evidence to show that *at least one* complementary therapy is effective at pain relief. (Do not accept evidence without accurate explanation).

- 22 Analyse in detail the structure of the reasoning in paragraph 8 by identifying elements of argument such as reasons, intermediate conclusions etc and showing their relationships to each other. [13]

Analysis of Reasoning AO1

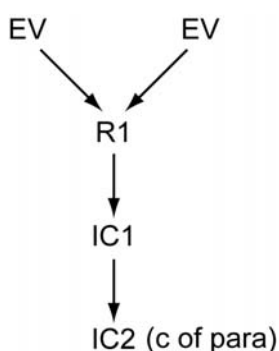
In all cases performance descriptors refer to candidates performing at the top of the band. Any candidate performing above the descriptor enters the bottom of the next band.

Candidates should demonstrate understanding of argument structure.

Candidates should identify elements of subtle and complex arguments using appropriate terminology.

	Performance descriptors
Level 4 10 - 13	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 7 - 9	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 4 - 6	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 - 3	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

- CA This is one of the most common charges made against complementary medicine - that most of it is no better than placebo.
- RCA
- Ev Harvard professor Ted Kaptchuk is publishing a study this week which shows that placebo is as good as any conventional treatment available for irritable bowel syndrome. (Accept Ex)
- Ev The eight most industrialised nations spend \$40bn a year on medication for this condition
- R1 (supported by Ev1 and Ev2) perhaps complementary medicine is an effective way to harness placebo as one of the most powerful - and cheapest - of healing processes.
- IC1 (so) [But] there is a way of turning that accusation around:
- IC2 (C) Rather than being derogatory about the phenomenon as "just" placebo, perhaps we should see it as one of the most remarkable and little understood aspects of the human body.



- 23 'We need scientists to help to identify what they are looking for and why, rather than pouring scorn indiscriminately on the whole field and on the relations between belief, mind and body, of which science still has such a fragmentary understanding.' (paragraph 10)

Evaluate the support given to this claim, which is the main conclusion of the argument, by the reasoning throughout the whole article. [30]

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.

	Performance Descriptors
Level 4 24 - 30	Candidates demonstrate sound, thorough and perceptive evaluation of strength and weakness in the support for Bunting's claim that, 'we need scientists to help...'. 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. <i>Candidates have evaluated the reasoning, making some relevant points to support their evaluation.</i>
Level 3 16 - 23	Candidates demonstrate a clear understanding of weakness in the support for Bunting's claim that, 'we need scientists to help...'. 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. <i>Candidates have made a mixture of relevant evaluation and irrelevant or inappropriate points in an attempt to evaluate the reasoning.</i>
Level 2 9 - 15	Candidates demonstrate basic awareness of strength and weakness in the argument generally, with little reference to Bunting's specific claim. Valid points may be isolated, but candidates begin to evaluate the impact of weakness on the strength of the overall argument. Candidates may attribute strength or weakness inappropriately and occasionally disagree with the reasoning or provide counterarguments rather than evaluating it. <i>Candidates make the odd relevant evaluative point amidst description and irrelevance.</i>
Level 1 1 - 8	Candidates demonstrate limited awareness of strength and weakness in the support for Bunting's claim. They make random or isolated valid points, attribute strength and weakness inappropriately and have little awareness of the impact of weakness on the overall strength of the argument. 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:

'You should **selectively** refer to key strengths and weaknesses which may include:

- 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.'
- How effectively reasons support intermediate and main conclusions.

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 four 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!

Indicative content

Bunting provides reasonable support for the first part of her conclusion, that, 'we need scientists to help to identify what they are looking for and why rather than pouring scorn indiscriminately on the whole field.' However, she provides very little support for the second part, 'and on the relations between belief, mind and body, of which science still has such a fragile understanding.'

Evidence from apparently reliable, reputable experts (cred) to show that *some* complementary health treatments are effective in some ways, and that there is scientific evidence to support this. This shows that there is a need to discriminate between treatments and that science can help to do so. Extended report / example on Sykes and references to Kaptchuk strong.

There is little evidence in the passage that scientists do pour indiscriminate scorn on 'the relations between belief, mind and body' as such rather than on the unsupported claims of some alternative therapists. There is also little support for the idea that science 'still has such a fragmentary understanding' of the relations between mind, body and belief. The only support really is the claim that 'the recent revelations about the inefficacy of Prozac were another reminder of how shaky the science is in large areas of conventional science' and this is an overstatement and generalisation from a single piece of evidence, which may or may not relate to 'the relations between belief, mind and body,' as depression may simply be a neuro-chemical malfunction. Furthermore, Bunting quotes evidence to suggest that scientists are researching placebo, which relates to the power of belief in curing the body (inconsistency). This means that this part of her claim is almost unsupported, which weakens the support for the claim overall.

Bunting probably overstates the position of the 'science warriors' or treats the extremes of this position as normal (straw person), and generalises from it to scientists in general, which weakens her reasoning. In particular, it weakens the part of her conclusion 'instead of indiscriminately pouring scorn...'

Bunting perhaps does not respond as effectively as she might to the counter position of the science warriors. She does not, for example, address the assumptions that reason is the only way to understand the world, that making a decision on any basis other than reason is perilous.

Bunting also makes largely unsupported, sweeping statements, such as, 'conventional medicine prolongs life but is less successful in prolonging good health.' Just because we are likely to spend more years of our life in poor health doesn't mean that conventional medicine is not prolonging good health – it shows only that the advances in conventional medicine do not give us as many more years of good health as of life. It is also uncertain what the government report is comparing with – more years of our life in poor health than when? This weakens the reasoning generally speaking, but in order to support the bulk of the conclusion Bunting needs only to show that scientists are generally scornful, that some complementary therapies have some benefits and that science can help us to identify which ones. She has done this, so the other weaknesses in her reasoning do not significantly detract from the strength of support for the claim that 'we need scientists to help to identify what they are looking for and why rather than pouring scorn...'

Key Points

Key points	Minor points
Only the first part of the conclusion is supported	Generalisation from science warriors to all science
Straw person re science warriors which weakens her claim that scientists indiscriminately pour scorn on the relations between belief, mind and body.	Sweeping generalisation
Significant claims unsupported (eg that science has a fragmentary understanding...)	
Strong use of some credible evidence eg Kaptchuk, Sykes, to show that there is a need to discriminate between treatments and that science can help us to do so.	Detailed repetition of low-level credibility points about every source mentioned.
Inconsistency of claims that scientists are researching placebo, and claim that scientists pour indiscriminate scorn on the relations between belief, mind and body.	Does not address the assumption that reason is the only way to understand the world.
In order to support the bulk of the conclusion Bunting needs only to show that scientists are generally scornful, that some complementary therapies have some benefits and that science can help us to identify which ones. She has done this, so the other weaknesses in her reasoning do not significantly detract from the strength of support for the claim that 'we need scientists to help to identify what they are looking for and why'.	We do not know what the government report is comparing with.

24 'It is dangerous to view science as the only way of understanding the world.'

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>dangerous</i> , <i>science</i> , <i>understanding</i> , <i>world</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>dangerous</i> , <i>science</i> and may anticipate and respond to counter argument. 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.

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 Written Communication

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 written communication:

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)
January 2010 Examination Series

Unit Threshold Marks

Unit		Maximum Mark	A	B	C	D	E	U
F493	Raw	80	55	48	41	35	29	0
	UMS	120	96	84	72	60	48	0
F494	Raw	110	84	75	66	57	48	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
H050	300	240	210	180	150	120	0
H450	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
H050	14.5	41.0	69.9	88.0	96.4	100.0	102
H450	7.1	57.1	85.7	100.0	100.0	100.0	31

133 candidates aggregated this series

For a description of how UMS marks are calculated see:

http://www.ocr.org.uk/learners/ums_results.html

Statistics are correct at the time of publication

OCR (Oxford Cambridge and RSA Examinations)
1 Hills Road
Cambridge
CB1 2EU

OCR Customer Contact Centre

14 – 19 Qualifications (General)

Telephone: 01223 553998

Facsimile: 01223 552627

Email: general.qualifications@ocr.org.uk

www.ocr.org.uk

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored

Oxford Cambridge and RSA Examinations
is a Company Limited by Guarantee
Registered in England
Registered Office; 1 Hills Road, Cambridge, CB1 2EU
Registered Company Number: 3484466
OCR is an exempt Charity



OCR (Oxford Cambridge and RSA Examinations)
Head office
Telephone: 01223 552552
Facsimile: 01223 552553