

# **Critical Thinking**

Advanced GCE A2 H450

Advanced Subsidiary GCE AS H050

## **Report on the Units**

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**June 2008**

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

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## **Chief Examiner Report**

This is the last full session of the current specification. Next year, many centres will enter for the new AS, although there are also two more papers from the current specification. The A2 continues for one more year before the new specification becomes available in 2010. Looking forward to the new specification makes this a good time to review candidate performance over the last few years.

There is no doubt that we have seen improvements in all four units. In unit 1, we now see very few candidates who are unfamiliar with credibility criteria and it is clear that many candidates are well-prepared for the structure and discipline of this paper. In unit 2, far more candidates understand how the passages are structured and can relate this to forming their own arguments. In unit 3, there are signs that candidates are beginning to understand how to apply principles to difficult dilemmas rather than reciting ethical theories. It remains true, however, that principles continue to be a challenge for candidates in units 2, 3 and 4. In unit 4, candidates are making far more astute comments about weaknesses in the reasoning presented in the resource material.

We would hope that the awarding process this year has reflected these improvements whilst maintaining continuity with previous sessions.

## F491 Credibility of Evidence

### General comments

This year the size of the candidature was more equally balanced over the Unit 1 examining sessions, with approximately 14,500 and 19,000 entries in January and May '08 respectively. Encouragingly the greater spread of marks evidenced in January '08 was equalled in the summer session, ranging from 0 to 78 out of a possible 80 raw marks. A pleasing number of candidates gained marks in the sixties and seventies, with focused answers that dealt sensitively with the issues of environmental impact, waste and recycling.

The overall level of performance was pleasingly higher than that of May 2007, but the summer session was again significantly affected by the number of centres that entered candidates who made a conscientious attempt at the questions without a firm understanding of the credibility criteria. Many of these often included an inappropriate use of *slippery slope*, *straw person* and *appeal to popularity* where an assessment of credibility was required. This may have been precipitated by entering inexperienced candidates for both units together in the summer session. Candidates from these centres rarely gained above 30 marks, many of which were gained through partial performance. In the weakest centres performance was very fragmentary and incomplete with comments such as '*Don't know what a credibility criterion means*'. Certainly, those entering candidates for Unit 1 in the January sessions and Unit 2 in May avoid the confusion of the skills required for each unit, which helps towards a higher level of performance in the January sessions.

The candidature as whole however engaged well with the topic, there being no discernible difference between the genders in their responses to the environmental impact of reusable and disposable nappies. Whilst a few treated waste management as if it were all the same and others talked of disposables as being *reused* rather than *recycled*, in the main this did not affect the marks gained. The strongest candidates evidenced even performance over each of the sections, gaining marks for suppositional reasoning in Q5 and for the more synoptic approach required in Q7 (e). The weaker candidates gained their marks largely in Q3 and from partial performance marks in Q1, Q5 and Q7.

Time management was again a strength, with those who gave targeted answers, maintaining their high levels of response to the end. Overall fewer candidates than in previous years appeared to run out of time. However centres where candidates appeared to struggle to make sense of credibility often evidenced incomplete papers with parts of questions not attempted.

### Comments on individual questions

#### Section A

- 1) The stronger responses were particularly pleasing in terms of the sensitivity that they brought to the issues raised in relation to how reporting might be weakened by the complexities of acquiring information, commercial needs and uninformed responses.

There was very little evidence of general answers without any reference to products or environment. However despite the question prompt '*other than nappies*', some centres focused their answers entirely on the passage, not just mentioning nappies, but giving a wholesale evaluation of the documents, thereby only accessing partial performance marks. In centres where performance was generally weak, many candidates made no reference to reporting or left this question blank.

- 2) This short question was a good differentiator. Most candidates were able to make an accurate comparison, although surprisingly few supported this with the reference to the data that was required by the question. Weaker candidates interpreted the statistics incorrectly, overlooking that those for Groundwork were ongoing annual figures, whereas those for WEN were a two year target.
- 3) This question produced some rather sophisticated answers identifying weakness in the Ecologist according to its potential agenda and the expectations of its readership. The more astute identified the Ecologist's reputation/expertise as self acclaimed. Most candidates were able to make adequate assessments using vested interest and expertise. However marks could not be accessed a second time when candidates used vested interest and then attempted a further assessment with bias mentioning gain or loss. These two terms need to be clearly differentiated in assessments, as do reputation and expertise.

Most candidates assessed the documents either directly or by discussing how sources within them contributed to the credibility of the document. Answers for The Ecologist often gained more marks than those for AHPMA, as in the latter a substantial minority found the UK Environmental Agency Report too tempting, ending up assessing this rather than the document, thereby only gaining partial performance marks.

In some centres *appeal to popularity, straw man, slippery slope and significance of data* appeared as inappropriate assessments of credibility, suggesting that these candidates did not have a firm grasp of the different skills required by Units 1 and 2.

## Section B

- 4(a) This question was answered well. Very rarely were mistakes made by including quotations from the text.
- 4(b) Candidates focused mainly upon cost and practicality, stating these in a succinct manner. Those that felt the necessity to explain the practicality of avoiding the *disgusting* nature of disposing of the waste, interestingly did so equally for reusables and disposables.
- 5) The number of strong responses that gained 5 marks for structured answers with clear suppositional reasoning was very encouraging. Additionally many candidates gained at least one mark in each subsection of this question for weaker responses. The vast majority correctly quoted a claim or gave a very near paraphrase, only a tiny minority giving an inaccurate paraphrase. In a very few cases candidates did not state a claim to be assessed. In these instances it was impossible to determine whether a credibility criterion had been correctly applied, as depending on the claim, the source might have neutrality in some cases, but not in others. These answers could therefore access no marks.

Disappointingly, in some centres development of the credibility criterion was entirely missing, being followed immediately by the supposition e.g. *'The former Waste Minister's claim that, "....." Is weakened by ability to see if.....'* in which case the intended supposition served only to explain the criterion and just gained the mark for the assessment. In Centres where candidates were confused about the skills required for Units 1 and 2, credibility criteria were lacking and assessment of the reasoning was given.

In stronger responses suppositions were often expertly identified, whereas in weaker cases they tended to be very circular; sometimes completely repetitive e.g. *'The former Waste Minister would have the necessary expertise about nappies, if he actually had expertise in this area.'*

The former Waste Minister's claims were more successfully assessed than those of WEN, although weaker responses took him to be still a member of the government, making the assessments inaccurate. A very few assessed the Daily Mail rather than the Minister, thereby gaining no marks. Only a very few candidates gave prejudicial assessments deeming that WEN would lack expertise because they were women.

- 6) As in the past this short question was a good differentiator, with those making a comparative assessment in relation to one criterion gaining both marks. Weaker candidates while tacitly mentioning both sides only assessed one, thereby accessing one mark. The weakest candidates used two different criteria to assess the two sources or used one criterion with a judgement without any explanation.

## Section C

In this session weaker candidates performed less well on (a) and (b) than in previous sessions, but better in (c) and (d).

In 7(a) and (b) strong candidates used the material available very economically, employing the same pair of references in (a) as in (b) but with different stated points of corroboration and conflict e.g.

*'...disposable nappies are the choice of 95% of parents'* - AHPMA;

*'...85% of people are using disposable nappies'* - Ecologist

served both to corroborate the claim that a significant number of parents use disposable nappies and to illustrate the conflict over the exact percentage. This demonstrated a more sophisticated understanding of the use of statistics to support claims.

In some centres candidates dealt only with one claim supported by two references, thereby halving the possible marks that they could access. The weakest candidates gave one unsourced reference to support a claim and gained no marks

- 7(a) Pleasingly most candidates attempted fuller answers than in the past, with a precise claim supported by two sourced references. Strong responses spotted secure corroborations relating to the crux of the dispute as to whether disposable nappies were any worse for the environment than reusable ones, or to exact numerical statements of the annual quantity and / or cost of the disposable nappy waste.

Weaker candidates made things difficult for themselves by attempting to find corroboration amongst references to overall impact including energy used in the production of disposables and in the washing of reusables, also the contribution of both to global warming. Or they attempted to contrast landfill, composting and recycling. The success or failure of this type of answer often depended upon the level of accuracy with which the statement of the point of corroboration / conflict was worded.

- 7(b) Many candidates did less well in this question, as they omitted to specify the point of conflict even when they had two good references, thus reducing their potential marks to four.

- 7(c) Encouragingly many candidates accurately identified the nature of the dispute with reference to the environment and the question as to whether disposables were no worse in relation to this, often going on to gain full marks for this question. Where answers mistakenly focused upon whether or not disposables were better, this led to inappropriate placings of the sources, as the former Waste Minister could be classed as a source that did not fit on either side.

## Report on the Units taken in June 2008

It was disappointing that in some centres marks could not be gained because candidates identified the documents in their lists rather than the sources within them, despite the repeated instruction in the question to '*Identify all the individual sources within the documents...*'

Pleasingly more candidates than usual *explained* a source that did not easily fit on either side, although for the weakest candidates this was all that they did for this question, seemingly concentrating on the last instruction in the list.

**7(d)** The strongest candidates gained two marks giving an answer that stated both the side had the greatest weight and supporting this in numerical terms. It was good to see that many students had the confidence to state that the sides had equal weighting, as this option had not arisen previously. Weaker responses gave one of the two answers required gaining one mark, whilst the weakest came down on the side of reusables giving a reason rather than assessing the weight of the evidence.

**7(e)** Pleasingly more candidates than previously answered this question in relation to sides and went on to make accurate comparisons that evidenced synoptic skills. However performance was patchy. Those that compared individuals rather than sides were able to access partial performance marks. However those from centres that continued their trend to identify documents rather than the individual sources within them gained no marks; as did weaker responses that did not go on to make specific assessments in relation to the identified criterion.

**7(f)** The majority of candidates answered this well, although the weakest contradicted their earlier assessments, giving a personal reason to justify their choice, gaining no marks

**QWC** Specialist terminology was expertly used by the strongest candidates, whilst the weakest confused bias with vested interest and treated reputation and expertise as if they were the same. *Withholding* and *withstanding* reputation appeared in some centres, as did a *vexed interest*. Misspellings such as *biast*, *arguement* and *cooberation* prevailed in weaker answers.

Looking at the F491 2008 examination series as a whole, it is clear that candidates have reaped the benefits of the hard work that has gone into helping them to develop the skills required. Not only has the range of marks widened with many more candidates gaining marks in the sixties and seventies, but also there is a discernible increase in the quality of the answers with a greater sensitivity to the issues and more sophisticated answers than previously.

In January 2009 F501 will replace F491, although the latter will continue as the legacy paper for a year. In both cases it is strongly recommended that centres enter their candidates for Unit 1 in January and Unit 2 in May to take full advantage of testing the introductory skills early in the year and to avoid possible confusion with Unit 2 skills.



## F492 Assessing and Developing Argument

### General Comments

Candidate performance on this paper was broadly in line with the June 2007 paper. The distribution of marks and overall performance on the multiple choice was strikingly similar to June 2007. Once again candidates demonstrated that they are more than equal to the many challenges presented by the multiple choice questions. On the written section, it was encouraging to see far more candidates understanding the structure of the passages and appreciating the need for accuracy in their answers. The further arguments showed a greater understanding of the need for a concise structure. Principles continue to be an area of weakness for candidates.

### Comments on individual questions

#### Multiple choice

Candidate performance covered the full range of marks. As intended, the first two questions proved to be the easiest in the paper. The two most difficult questions were 6 and 16. Questions 6 represented a more challenging assumption, balancing some of the more straightforward examples of this skill tested in the written part of the paper. Comparatively few candidates got question 16 correct and those that did were the most able of the cohort. The 'trick' here is to recognise that counter assertion, conclusion, supporting argument is a very common structure (candidates often use it in their own arguments). Most candidates picked distracter A which is not a conclusion of the passage, but a conclusion that could be drawn from the passage.

### Section B

#### Question 21a

The majority of candidates gave the correct answer. Some gave the intermediate conclusion (and then often gave the main conclusion in answer to 21b) and others lost marks by including more than the conclusion. As with previous sessions, answers of this type were generally given 1 mark.

#### Question 21b

Generally very well answered, although some candidates abbreviated the intermediate conclusion to 'The impact of supermarket expansion is negative' and were only awarded 1 mark.

#### Question 22

A great many students were awarded all 10 marks. The commonest mistake continues to be adding evidence/additional information with the reason. For example, 'students working on the check-outs means that supermarkets could be limiting educational aspirations'. These answers were awarded 1 mark as were answers that changed key words or ideas within a reason. For example, many students changed 'some of our current health problems' to just 'our current health problems'.

#### Question 23

Although just about all students understood that it was necessary to assume that the closures were related to the low price paid by supermarkets for milk, very few understood that it is not necessary for every closure to be related to the low price of milk. Assumptions need careful phrasing and in this case a correct answer required some sort of qualifying term that made it clear that large numbers of the dairy farms had closed as a result of the low price of milk.

'Significant majority/majority/most' or even just 'a lot' would all have helped give the right sense. Candidates need to appreciate situations in which assumptions need this type of qualifier and situations when an 'all' is required in the assumption.

**Question 24**

As usual, the 1 mark questions tend to be the more straightforward ones and the overwhelming majority of candidates scored 1 mark. Common answers referred to foot and mouth or even the desire of farmers to pursue different careers.

**Question 25**

Many candidates scored 2 marks and latched onto the idea of the farms being both smaller and less mechanised. Some lost 1 mark for referring to dairy farms. Other candidates referred to small *or* un-mechanised and were awarded 1 mark.

**Question 26a**

A more obvious assumption easily identified by candidates.

**Question 26b**

Most candidates accurately wrote down 1 of the three pieces of evidence. A few lost the mark because they wrote answers like '19 million tonnes of carbon dioxide'.

**Question 26c**

This was without doubt the most difficult question on the paper and very few candidates received any credit. The candidates needed to understand that a comparison is needed to make an assessment of the evidence: food clearly has to travel some distance to get to a shop/our houses so that we can only judge the waste if we know how much shorter the journeys would be/how much less CO<sub>2</sub> would be involved in buying food from local shops. Some candidates clearly had understood this, but were not always able to express a complex idea successfully. Many candidates, incorrectly, went down a credibility route and suggested that the evidence offered strong support because the figures came from the government. More worryingly, many candidates seemed to think that the presence of 3 numbers was, in itself, enough to be strong support. This is at the heart of critical thinking: evidence needs to be assessed just as much as the overall argument.

**Question 27**

Surprisingly few students used the information about varieties of apples and cheese available in order to answer this question. Most of the correct answers focussed on the fact that importing fruit must have extended our choice. Some candidates were not able to clearly express the difference between 'availability' and 'choice' and lost credit as a result. Other candidates ignored the instruction in the question and used information from outside of the passage to answer the question. These answers were not given any credit.

**Question 28**

A great many correct answers that showed good understanding of the issue. Many candidates commented that we would need to know that the food would have been suitable for consumption/was not rotten or that it was not used for some other purpose. Far too many candidates 'hedged their bets' in response. A common example would be 'we would need to know if the food was rotten or in good condition'. Although we were able to give some credit for this type of answer, it must be pointed out that it does not address the question. If the food were rotten, it would not be deemed waste and the argument would not be supported. The candidates must give unambiguous statements that would support the argument.

**Question 29a**

Although written to be a 'post hoc' flaw, many candidates saw it as a 'correlation not cause' flaw. Although there is not a correlation at work in the original passage, all answers of this type were accepted. Many candidates referred generically to a 'causal flaw' and we also accepted this.

**Question 29b**

Whilst we saw some excellent answers, many candidates continue to *describe* what the author has done rather than explain the *problem* with what they have done. Others continue to disagree with the author (heart problems are much more likely to be caused by smoking). However, many candidates did understand that there could be another factor at work and were awarded some credit for this. Only the best candidates understood the idea that the order of the events (rise in heart disease following supermarket expansion) was not enough to infer a causal relationship when it would be very likely that there would be other factors involved in heart disease.

**Question 30**

Although a more straightforward example of this type of question, it was still pleasing to see so many candidates 'spot it' and express their answer accurately. (As a related point, centres would be well advised to spend some time on the difference between a contradiction and inconsistency as some candidates did not appear to understand the stronger meaning of 'contradiction')

**Question 31**

Although many candidates saw the vested interest that the group of MPs might have, fewer understood the action that might follow from this interest – the possible exaggeration of the figures/plight of small shops.

**Question 32**

Many candidates understood exactly what was going on, but lost credit because their answers referred to all of the 2000 shops closing due to supermarket expansion. As with question 23, this question requires candidates to understand that we do not need to assume that *every* corner shop had closed as a result of supermarket expansion.

**Question 33**

Very few correct answers were seen and it is clear that candidates do not understand what to do with questions about principles. Looking forward to the new specification, more focus on this area would benefit candidates.

**Question 34a**

Most candidates were able to give ad hominem or attack on the person as their answer.

**Question 34b**

Better candidates followed the instructions in the question to the letter and were able to show that the author could not dismiss the argument about creating more jobs by attacking the bosses for being selfish and greedy. For three marks we really wanted to see the sense of 'should not have' or 'instead of' so that we knew that the flaw comes from the incorrect attack on character rather than addressing the argument. Many candidates suggested that the author was being unfair about supermarket bosses as they will not all be selfish and greedy. This may well be true, but has nothing to do with the flaw. As with question 29b, some candidates did no more than describe what the author was doing (the author tries to discredit the supermarket bosses' argument by attacking their character).

**Question 35**

Lots of really good answers that contrasted the ease of re-opening of corner shops and coal mines or looked at how fuel supplies might run out in a way that supermarkets will not run out of food. We also saw some sophisticated answers that assessed the relative impacts on local communities, perhaps in terms of the huge job losses involved in closing coal mines compared to the smaller job losses involved in closing corner shops. Some candidates did not understand the need for a comparison or contrast and commented only on corner shops *or* coal mines and lost credit as a result.

**Question 36**

Many good reasons referring to hygiene, protection during transport or even the necessity of giving nutritional information. Far fewer marks were given for the conclusion as candidates tended to turn it into another reason. We wanted 'packaging is essential' but often saw (for example) 'packing is essential because it protects food from contamination and bacteria' which is a reason and the conclusion.

**Question 37 and 38**

Compared to previous sessions, we saw fewer weak answers that showed no evidence of structure or development. The majority of candidates demonstrated an understanding of how arguments are constructed, including reasons, intermediate conclusions and conclusion in their answers. We also saw fewer arguments heading toward completely the wrong conclusion. However, we also saw fewer really strong arguments. This was because the reasons given were often of questionable relevance to the conclusion and intermediate conclusions did not always move the argument forward. For example, in question 37 candidates often used reasons related to the benefits of working in a supermarket *in general*, rather than focussing on benefits related to educational aspirations/ambitions. Intermediate conclusions often were no more than a summary of the reasons or did not seem to follow from the reasons that came before. In question 38, few candidates gave reasons related to supermarket expansion, rather than just the pros and cons of supermarkets in general. The bulk of the answers that we saw were therefore given marks in the 4-6 band.

A great many candidates, whilst using clear structures, wrote arguments that used implausible reasons. For example, supermarkets selling foreign foods has clearly not reduced racial tensions in this country. The key point here is that arguments need structure and coherence: they must make sense.

The new specification will demand a little more of candidates on the further argument questions and I would encourage centres to work with candidates to ensure that reasons are directly relevant to conclusions and that intermediate conclusions are well supported and move the argument forward. It would also be helpful to show candidates that a well-chosen example or piece of evidence enhances an argument whilst lists of fictitious statistics do not.

## F493 Resolution of dilemmas

### General Comments

The examination was of a similar standard to previous sessions, and produced a wide range of marks. Some candidates produced excellent answers, whereas others showed that they had little or no idea of what the examiners expected. With few exceptions, weak answers came from a small number of centres. Similarly, centre effects were seen for timing: candidates from some centres found it difficult to complete the exam in the time available, whereas other centres seemed to have no problem with timing.

A few centres had encouraged their candidates to answer questions 3 and 4 before 1 and 2, presumably in order to avoid wasting too much time on the short questions. That policy addresses a real issue, but it also has some disadvantages, since the short questions are intended to prepare the ground for questions 3 and 4.

As always, careful attempts were made to avoid any cause of misunderstanding in the Resource Documents, but some unforeseen problems did occur. Although the word “crude” was used in a slightly sophisticated way in Document 1, examiners had been unaware that in modern teenspeak it means “brutal”, and were therefore surprised when it was interpreted in that way by most candidates. Candidates were not penalized if they thought (as many did) that the reference to “breeding” in Document 3 (ii) referred to research on reproduction rather than producing animals for experimentation.

Overall, there was a surprising lack of understanding of the nature of animal testing, which led some candidates to make unrealistic judgments. Many clearly did not realize that animals used in experiments are bred for the purpose, and a few of them expressed a concern lest continued experimentation should cause rats and mice to become extinct. Most candidates did not realise how speculative the experiment in Document 4 was, and thought it was highly likely (or even certain) to prevent brain damage in neonates.

As on previous occasions, many candidates used their sources uncritically, although some candidates who in other respects were relatively weak had clearly been trained to give evidence of evaluation, and achieved marks accordingly. Despite having identified bias in docs 1 and 2 for Q1, some candidates then quoted and referred to the same documents entirely uncritically in Q3 and Q4. Some candidates showed evidence of critical use of sources in Q3, where they were specifically instructed to do so, but then used the same sources uncritically in Q4b.

### Comments on Individual Questions

#### Question 1

Many candidates achieved full or nearly full marks on this question. Most identified bias as the main difficulty. A significant number offered only bias, without dealing with the two documents separately, and could only get up to five marks. Nearly everyone used “bias” as an adjective (in place of “biased”).

Some candidates achieved few or no marks because they failed to understand the question, using the documents to identify problems in assessing animal testing instead of identifying problems in using the documents. Others offered positive evaluative points, although the question had asked specifically for “problems”.

## **Question 2**

A large proportion of candidates scored 5 or 6 marks out of 6. The answers identified on the mark scheme were by far the most popular and persuasive.

Most of those who lost marks did so because they identified general factors which did not relate to Document 3: many of those scored zero. When questions of this kind ask for factors from a particular document, it is advisable to begin with the document and draw implications from some of its contents.

## **Question 3**

Most candidates interpreted the instructions correctly, applying two criteria to two choices, although nearly all the candidates from one large centre thought they were supposed to identify one choice to satisfy one criterion and another choice to satisfy another criterion, which prevented them from drawing any interesting comparisons and limited the mark they could achieve.

The safest way for candidates to make sure they had covered everything was to write four sections, applying two criteria to two choices. Long introductions and conclusions rarely added much. Within as many as possible of these four sections it was helpful if candidates considered both sides of the coin. The only drawback with this strategy was that it did make some essays rather repetitive; for example all that one might say about animal welfare offering grounds to BAN animal testing could be repeated as grounds not to CONTINUE animal testing.

One examiner has suggested that such repetition could be avoided by a two-section essay in which, say, the first dealt with animal welfare and applied it to BANNING and CONTINUING animal testing, and the second section considered, say, medical benefits and applied it to both choices. It is advisable for candidates who do this to make sure they include the key words "ban" and "continue" in both sections, otherwise it can look as if they have not even met the criteria for level 2.

Many candidates found it unexpectedly difficult to keep to the topic they were discussing at the time - questioning medical benefits under the heading of "welfare of animals", for example. Similarly, some references to resource documents were irrelevant to the particular point being discussed.

The overwhelming majority chose "ban all animal testing" versus "allow animal testing to continue as it is at present", with "the welfare of animals" and "medical benefits" as criteria. Better candidates made less extreme choices, which generally made it easier to write higher-level answers. Candidates who chose "cost-effectiveness" as a criterion tended to find it very difficult. Those who chose "scientific value" tended to write about medical benefits instead. Some candidates interpreted "strengthen the regulation of animal testing" as if it meant "strengthen the effectiveness of animal testing".

Only the best candidates were able to find any possible medical benefit to banning animal testing, or any animal welfare benefit to continued testing.

As usual, many candidates had difficulty in differentiating between the singular and plural forms of the word "criterion".

## **Question 4**

Candidates from many centres had clearly been taught how to answer Q4a and achieved 4 marks out of 4, but entrants from other centres showed a partial or complete lack of understanding of the nature of a dilemma, despite the title of this unit and this comment has been made by examiners every year. To gain full marks in Q4a, candidates needed to state both sides of a choice in full (i.e. not using "or not" as the alternative) and to identify the adverse consequences of each side.

## *Report on the Units taken in June 2008*

The topic of this exam posed particular problems, since many ethical principles apply principally or exclusively to humans. Candidates and their teachers need to realise that topics chosen for this exam will sometimes refer to animals or to the environment.

Those candidates who used “need”, “desert” and “rights” as their principles did not find it easy or convincing to apply them to this topic.

Most candidates derived their ethical principles from major ethical theories. They generally appeared to be better taught on principles than a few years ago. It was rarer for candidates to list half-understood principles, or give short histories of Bentham or Kant, and more common for candidates to be fairly familiar with principles which they were able to apply. Candidates from a few centres, however, showed or even stated explicitly that they did not know what a principle was.

Most candidates discussed a form of Utilitarianism and some deontological principle. Some of the discussions of Utilitarianism were aware that the pleasure and pain of animals is included in the Hedonic Calculus, but others assumed that it applied to humans only. Some good candidates discussed whether animals should or should not be included, and a few of them drew on Mill’s distinction between higher and lower pleasures. Although some candidates referred to the Hedonic Calculus, few if any recognised the importance of certainty as a criterion in this case. Those candidates who applied Prudentialism as well as Utilitarianism generally found themselves forced into inventing spurious differences between them.

Many candidates applied the Categorical Imperative (CI) to animals, and some of them commented that they were going further than Kant himself had. A few good candidates discussed whether the CI should or should not apply to animals.

Unexpectedly, many candidates applied Rawls’s theory of political philosophy to this issue. A few of the best answers questioned whether the Veil of Ignorance could include species membership.

A large number of candidates either stated or assumed that animals had equal rights to humans or that they did not, but failed to discuss how there might be some position in between.

Only strong candidates were able to find support for more than one side of the dilemma in each principle. Nearly all candidates concluded that testing on animals for the benefit of humans should continue. On previous occasions, nearly everyone has presented arguments in favour of both sides of the dilemma, but some have failed to come down on one side or the other. In this case, by contrast, nearly everyone came to a conclusion, but some had defended only one side of the dilemma.

## **F494 Critical Reasoning**

### **Section A**

#### **Multiple Choice**

#### **General comments**

In general, candidates performed well on the multiple choice showing an improvement on January. There is still room for improvement on questions requiring analysis of argument, but evaluative questions were largely done well.

### **Section B**

There was considerable improvement in comparison with previous June sessions in the analysis and evaluation of argument. There is evidence that centres have really got to grips with preparing candidates for these parts of the paper. Strong candidates were able to access very high and occasionally even full marks in these questions. However, performance in AO3, development of reasoning, lags behind performance in AOs 1 and 2 (analysis and evaluation). Centres now need to focus on helping candidates to write short, structured and reasoned arguments which question key terms, use strands of reasoning, anticipate and respond to counter argument and above all, have a clear logical structure in which reasons support intermediate and main conclusions.

#### **Q21**

Most candidates were able to identify at least some of the elements, although d) caused problems. Most candidates wrote 'main conclusion' even though the question made it clear that the element was 'not in text.' The definition of an argument includes the necessity for a stated conclusion (i.e. one which is written in the text). Even at AS, candidates are expected to understand the difference between identifying a conclusion which is stated in the text, and drawing a further conclusion from evidence or reasoning in a given text.

An increasing number of candidates were able to explain the function of each element in this particular argument, which was pleasing. Such candidates were able to say of part a) that this is an intermediate conclusion which acts as a response to the counter argument outlined in paragraphs one and two about genius being born and brilliant children deserving special education.' A large proportion of candidates did still attempt to answer this part of the question by giving a generic definition rather than placing the element in this particular argument. This deprived them of marks that they may have been able to access.

#### **Q22**

Almost all candidates performed the right task this session, of breaking down the reasoning into its elements and considering the structure of the argument. A few still attempted to evaluate rather than analysing.

Most candidates were able to identify and accurately label the main conclusion of the paragraph (and many understood that this was also an intermediate conclusion in the whole argument) and the main reason given. Many were also able to identify that the end of the paragraph was evidence. More candidates were able to show some understanding of the structure of the argument by accurate use of 'support' or a diagram to show the structure of support. Of those who used diagrams, more used them accurately than in previous sessions.



Only the strongest candidates were able to show an understanding that the evidence contained a reason and an intermediate conclusion (of those who tried, most got these the wrong way round, following the order of the passage rather than any logical links), and the most able were able to see that the paragraph was a chain of reasoning.

Overall, a pleasing performance.

### **Q23**

This question was very well done. Candidates accessed the whole range of marks, but almost all were attempting the right task. The strongest candidates realised that the author confused the necessary condition of hard work with hard work being sufficient for genius, conflated brilliance, genius and achievement, confused cause and correlation, misrepresented 'the thinking' by assuming that current thought excludes the understanding that hard work is necessary for the realisation of brilliance, persistently generalised from inadequate data and showed an understanding that these flaws weakened the passage to the extent that the intermediate conclusion, 'the thinking is wrong,' could not be accepted. These strong candidates selected key weaknesses, considered how these weaknesses affected the strength of the argument and retained a strong focus on the claim, 'the thinking is wrong' and what it meant for this claim to be weakened. For example, these very strong candidates made comments such as: 'The author assumes that the current thinking about genius being born believes that because genius is born, you don't have to work hard and nurture your genius in order to keep being a genius. But this is a straw person flaw because most people who think genius is born probably do think you have to work at it too. So, if the author has misunderstood or misrepresented the thinking, then the thinking isn't necessarily wrong. This is a serious weakness because the whole argument is intending to show that this current thinking is wrong.'

Some candidates made perceptive points and identified key weaknesses such as the confusion of necessary and sufficient conditions, but did not consider the impact of these on the strength of the reasoning, limiting the marks that they were able to access.

The majority of candidates worked through the text, making comments such as, 'the author is generalising from one school to everyone who might be a genius,' and saying, 'this weakens the claim.' Weaker candidates tended to focus on credibility points about the evidence and to pick at the evidence, often making repetitive points about appeals to authority. They generally did not evaluate the effect of any weakness on the strength of the argument, or where they did, tended to be vague or to misattribute strength.

### **Q24**

Where there was evidence that candidates had not managed their time well, or had not been able to complete all the tasks in the time, this was the question that was most often rushed or not attempted. Candidate who did attempt the question were normally able to make some relevant evaluative points.

### **Q25**

This question tests AO3, Development of Reasoning. This is an area in which able candidates, in particular, could improve. It is not uncommon to mark scripts in which candidates show a very high level of understanding of strength and weakness in the reasoning in the stimulus passage in their answers to Q23 and Q24, but then writes a ramble or discourse on a theme in this last question. These may be perceptive but they often lack structure and do not have strong links of support between reasons and intermediation conclusion. This means that they do not access the highest marks and occasionally cannot even access middling marks.

There is some evidence that candidates are being given tick lists of elements to include in their argument and working on the basis that including these elements will suffice to gain a good mark. It is true that good candidates tend to define their terms, anticipate and respond to counter argument and use strands of reasoning. However, where these are 'empty', ticking the

boxes is not sufficient. An anticipated counter argument must be apposite, and a response to this counter argument should actually respond to it and give us a reason not to accept the counter argument. Strands of reasoning must be driven by logical support rather than simply listing different opinions relating to educational needs or educational desert in the same paragraph.

Most candidates were able to produce an answer to this question but most conflated 'same' and 'equal' and few really went beyond the passage. The questions are designed so that candidates are not reliant on the passage and can bring in their own knowledge or ideas. Thus questions about education need not have focussed on genius, although most candidates did limit themselves to discussing the different ways in which able children and children with learning difficulties should be educated. Quite a number of candidates were able to talk about visual, kinaesthetic and auditory learners, and some even used this understanding to support an intermediate conclusion.

There were some strong answers to this question, which showed a pleasing understanding of how to support a claim.

### **Quality of Written Communication**

Most candidates were able to write in clear, coherent English and communicate their thoughts and reasoning with reasonable clarity. Most were able to use technical terms such as names of argument elements, names of flaws, assumptions etc with some accuracy. This represents an ongoing improvement.

# Grade Thresholds

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

## Unit Threshold Marks

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

## Specification Aggregation Results

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

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

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

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

## 27779 candidates aggregated this series

For a description of how UMS marks are calculated see:

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

Statistics are correct at the time of publication

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