



General Certificate of Education

Critical Thinking 1771

CRIT2

Unit 2 Information, Inference, Explanation

Report on the Examination

2009 examination - June series

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CRIT2

Unit 2 Information, Inference, Explanation

General comments on assessment policy for CRIT1 and CRIT2

Examiners are instructed to adopt a positive-marking approach. In broad terms what they are looking for is evidence that the candidate can reason critically, and has sufficient grasp of the required concepts (listed and explained in the specification) to demonstrate that ability. There are some questions which simply have a right, or most plausible, answer; although just as often there is scope for alternatives. Thus, even if a candidate comes up with an answer that is not among those credited by / suggested in the mark scheme, credit is given if the above criteria are met. For example, consider a 2-mark question for which the credited answer is:

‘Conclusion C is not justified (1) because it assumes a causal connection where there is only a statistical correlation (1).’

If a candidate answered that there is (some) justification for C because the correlation is so strong that it is reasonable to infer a causal relationship, it would be clear that the relevant concepts were being applied in a critical way, and some or all of the marks would be awarded (depending on how reasonable the inference was and/or how strong the correlation.)

In keeping with this policy, there is no requirement for candidates to write at length or to elaborate beyond what is needed to answer all parts of the question. Indeed, an important skill to acquire in critical thinking is the confidence to answer crisply and economically and to avoid redundancy. In the above example no extra credit is available for going on to give a list of alternative explanations for C unless these are asked for in the question, and doing so will merely use time better spent on other questions.

Nor is there a *requirement* for answers to be given in stylistic, elegant or polished prose. Although the ‘quality of written communication’ is taken into account (especially in the Section B responses on both papers) this requirement is fully met if meaning is clearly conveyed in standard English.

Finally there is no requirement to use technical terminology, other than when it is specifically referred to in the question. Knowing a technical term can assist a candidate in answering succinctly, but it is not obligatory to do so. If the point in question can be made in plain, non-technical terms the full range of marks is accessible.

In summary, it is understood that this is an intellectually challenging subject, and that the associated ideas are often difficult to articulate. Marks are not awarded unless a candidate has shown understanding of the question and related concept(s), but benefit of the doubt is applied where a candidate is obviously on the right track but has struggled to convey an idea precisely. It is critical *thinking* that is being assessed.

General Comments on CRIT2

Given that this was the first examination of this subject by AQA, the results were promising. There was a wide spread of marks and evidence from many candidates of considerable mastery of skills in critical analysis and evaluation. Generally the quality of written communication was of a good standard. There was also evidence among many candidates, though not all, of familiarity with the specification and the related concepts, which in turn suggested that there has been some excellent teaching. In contrast, some candidates were clearly not sufficiently well prepared, and this was apparent from their failure to recognise the purpose of some questions. There was evident variation between centres possibly reflecting differences in contact and/or study time allocated to the subject.

Most candidates finished the exam, with many having time to write substantial responses to the final, essay question. Time management is an important factor with this subject: there is a significant amount of reading matter and many of the questions require thought and deliberation. It is essential that candidates match their responses to the number of marks allocated to the question, and do not write at length when a sentence or two will suffice. The space available for the answer does not have to be filled and should not be taken as an indicator of expected length. A rule of thumb for this paper is to allow one minute for each available mark, leaving 20 minutes for reading and thinking.

Reading strategies are also worth mentioning. People vary in the ways they read for information, and candidates will develop their own approaches, but as a general rule it is probably best to scan and skim-read the documents in the first instance, getting an overall impression of the subject matter and treatment, noting the different types of data, rather than trying to take in and memorise the detail. This is because most if not all of the question will focus on just one document each, or even a paragraph or two within a document, giving time for focused reading then.

Section A

This section required short answers to questions assessing the skills and understanding specified in the Foundation Unit, and in the specification for Unit 2. The latter include: understanding and interpreting information and data in various forms; assessing and drawing inferences; assessing and suggesting explanations. Some basic arithmetic and data-handling skills are required for this unit, together with simple mathematical reasoning.

Q1: This was a three part question. In all three parts credited response was for recognising the inadequacy of the data as support for certain conclusions. In 1(a), for example, the conclusion assumed a causal connection where none was justified. Most candidates – and probably all who were familiar with the cause-correlation fallacy – saw this and answered correctly, using appropriate language

Q2: Few problems. Most candidates identified some grounds that justified the use of 'democratise'.

Q3: Most candidates recognised one or both conclusions, but struggled with the second part of the question, identifying assumptions. Assumption questions are notoriously hard. The secret, very often, is to look for the obvious. Here for instance the author has argued that illegal sharing harms musicians on the grounds that they rely on the investment provided by the record companies. This reasoning depends on the assumption that musicians actually *do* rely on these investments; or by the same token, that they cannot get their funding by any other means. If they *can* manage without the investment (*don't* have to rely on it), the argument is undermined. Thus the author implies the musicians' reliance on investment by the industry without explicitly stating it. Those who did successfully identify an implicit conclusion generally had no difficulty saying whether or not it was warranted, and why.

Q4: Straightforward for any candidate who understood the meaning of 'principle'. Most did.

Q5: Though not a particularly easy question, this was generally well answered. Many candidates drew the distinction between simply restating that something is illegal and explaining *why* it is.

Q6: Straightforward and generally well answered.

Q7: Another challenging question (especially the follow-up part) which a good proportion of candidates nonetheless answered very well, understanding that an average value does not apply to each individual within a wide distribution; or that one individual within a wide distribution is not necessarily representative of the whole.

Q8: Mixed response. This question required candidates to merge two items of data from different sections of the document. These were as follows: from the text 75% of musicians were better off, so 25% were worse off or the same; and from the chart that not all of these 25% were in the 150k band. Candidates tended either to get this one right, or miss the point altogether. The lesson to draw here is that the data needed to answer a question, or support an inference, will not necessarily all come from one source, or be found in one place. Both lateral and logical thinking was required here. A minority, though a sizeable one, gave the right answer and the right explanation for it.

Q9: Part (a), identifying the explanation, gave few problems. Part (b), again an assumption question proved very demanding. Here there were many acceptable answers: for example, that the ability of artists to build their own fan base, or the inability of the industry to dictate, are sufficient grounds for saying that music is ‘alive’ and/or ‘healthy’. Several candidates expressed this in terms of an assumed definition of ‘alive’ and/or ‘healthy’. Others said the assumption was that music wasn’t alive and healthy before. These were all good answers and received credit accordingly.

Q10: The two parts of this question were the most straightforwardly mathematical and they divided the candidates quite sharply. (a) required simple extrapolation, and proved the easier of the two. There is a warning to take from it, however, about questions which begin: ‘If the trend continues...’ (or similar). In such cases there are no marks for saying that the extrapolation or prediction cannot be reliably made *because the trend may change in the future*. (b) required a simple subtraction of gains in digital sales from losses in physical sales, and observing that the first did not compensate for the second. The most common cause of failure was to look at these percentages rather than actual values. Practice in reading data of all kinds, and looking for trends and patterns, is the best preparation for questions like these. Also non mathematicians should not allow themselves to be put off by the sight of numbers: the maths is not hard.

Q11: Most candidates recognised the blatant *tu quoque* and identified it by name, or stated that two wrongs don’t make a right – or both.

Section B (Q12):

On the whole the responses to this question were impressive. Critical Thinking is not judged in terms of writing skill *per se*, although the highest marks require clear communication and a short, well-structured essay. In fact the standard of written communication was high in the great majority of scripts, giving some support for the claim that critical thinking does have a spin-off in improved clarity of thought and expression. Considering the fact that for many candidates this was the last lap of two back-to-back CT exams, the performance was impressive. As already stated above, the majority finished the paper and wrote substantial answers to Q.12.

This section is the candidate’s opportunity to draw on the whole range of critical skills and to apply them to the construction of their own arguments. Obviously there is no right or wrong conclusion here, and there is no requirements for the essays to be structured in any prescribed way. However, it is essential that candidate read the rubric carefully and respond to it. If they don’t they will miss opportunities, however good the rest of their reasoning is. For example, there were two bullet points that many candidates ignored or forgot to address. One was that

they should make reference to one or more principles; the other was to consider at least one possible objection or counter to their own reasoning, and to have some answer to it.

The bulk of the marks for this question are for the strength of the reasons offered in support of the conclusion, and for the use of information, either drawn from the source documents or from candidates' own knowledge and experience, or both. Here candidates face a choice – whether to make a number of brief points, using several items of information; or to limit the discussion to one or two lines of reasoning and to develop them more thoroughly. Neither is the recommended or better choice. Candidate should be aware that that marks are awarded for the quality of the reasoning not for the quantity of points made or items of data used.

A number of marks are also available for a clear statement of the conclusion. It is important that this is not neglected, but sadly some candidates did neglect it, leaving it very unclear exactly which position they were defending. It should also be emphasised that whatever conclusion the candidate draws, it must be consistent with the accompanying argument. A common fault with argumentative essays is wavering from one side to the other, especially when dealing with objections. In some cases the candidate's chosen line may be that there are arguments on both sides, or that the jury is still out. That is fine, but if it is the chosen line then it too must be stated as clearly as any other the conclusion, and the arguments given for each side should reflect the balance. Obviously – and especially in light of the comments above – it is good practice to take some time to plan or write an outline of the essay before writing.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the [Results statistics](#) page of the AQA Website.