

Thinking and Reasoning Skills

OCR Level 2 Award in Thinking and Reasoning Skills **J930**

OCR Report to Centres

January 2012

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This report on the examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the specification content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the examination.

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OCR Level 2 Award in Thinking and Reasoning Skills (J930)

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Overview

It is pleasing to be able to report that the fourth sitting of the Award in Thinking and Reasoning Skills was once again very successful.

It was very encouraging to see such a significant increase in the size of the entry compared with last January. The quality of performance was strong and both papers were set at the appropriate standard. Candidates were able to gain marks commensurate with their ability. There was no evidence of the question rubric being ignored or misunderstood and timing did not appear to be an issue. There were more questions which attracted no response on the second unit than the first, but this was not a significant feature of this series' papers.

The majority of candidates were able to use specialist terminology in the correct context and there was plentiful evidence of candidates having been well prepared for the examinations in terms of the skills that were being tested. The topics covered in the stimulus material seemed to be well received and candidates approached this material with confidence and some enthusiasm in their answers. The questions which carried a higher mark tariff in both papers differentiated well between candidates of varying ability. Stronger answers rose to the challenge of the questions with well structured and focused answers, whilst the weaker responses were able to attract partial performance marks.

Whilst some very strong answers were seen in questions testing AO3, there was a tendency for many candidates to limit themselves to marks in level 2 and not reach the higher marks available in the level 3 bands. In particular, a number of answers were seen in both papers which contained too much counter-argument and not enough development of the reasoning in the main argument. Advice contained in previous reports to centres and in the reports on the two units this series should be read carefully to support guidance for candidates in future series. Overall, candidates tended to perform better on the B901 paper than in the B902 paper. Questions which tested similar skills were often better answered with unseen stimulus material than with the pre-release case study of the second unit. This was the case for instance in questions testing skills 1, 2 and 8. In these examples, the structures of arguments, flaws and analogies may be more sophisticated in B902 than in B901 because they will have been seen in advance and studied in class. It is important again to stress the need for centres to ensure time is set aside to work on the pre-release material.

B901 Thinking and Reasoning Skills

General Comments

The paper was both accessible and of an appropriate level of challenge. There were no common misinterpretations of the rubric and most candidates were able to complete the paper in the allocated time.

In Section A, most candidates were able to apply the wider thinking skills to the problems with which they were presented. Many candidates found it harder to use a visual argument map to recognise and represent the structure of an argument.

In Section B, the overwhelming majority of candidates were able to use technical terminology to recognise flaws in arguments, suggesting familiarity with Skill 2 of the specification. Many candidates found it harder to apply Skills 2 and 4 effectively when the question did not explicitly direct them to name flaws, appeals or credibility criteria.

Comments on Individual Questions

Section A

Question 1 (a) (i):

Most candidates circled the two conclusion indicator words “therefore” and “so”.

Question 1 (a) (ii):

Good answers recognised that the second sentence of the argument contained both reason and an intermediate conclusion and that, therefore, only part of the sentence should be bracketed.

Question 1 (a) (iii):

Most candidates identified the final sentence of the argument as the main conclusion.

Question 1 (b):

The question required candidates to draw an argument map and it was evident that the majority were aware of what an argument map should look like. Nevertheless, a significant minority appeared to be unfamiliar with this skill.

It should have been clear from part (a) of this question that the argument contained an intermediate conclusion and so the argument maps drawn by the candidates should have included this argument element.

Candidates who achieved maximum marks for this question recognised that there were two joint reasons in the argument. This should have been shown by a plus sign (+) between R1 and R2 and then a single line (or arrow) leading to the intermediate conclusion (IC).

Question 2:

Parts (a) and (b) required numerical problem solving skills, which were applied successfully by the large majority of candidates.

Part (c) required candidates to identify different reasons why a journey by bicycle may be quicker than one by bus. Many candidates achieved maximum marks by offering three alternative explanations. Some candidates offered answers that were vague or unclear such as “traffic”.

Question 3 (a):

The relevant skills were that candidates should be able to identify patterns in a table of data and that they should be able to draw conclusions from these patterns. Good answers identified the pattern that no males in the class chose horses as their favourite animal. Good answers went further by drawing the conclusion that this does not necessarily mean that they dislike horses. Many candidates incorrectly identified the claim as “true”, but they often went on to gain credit in part (ii) by identifying an accurate pattern in the data that was consistent with the claim, even though the claim itself was false.

Question 3 (b):

Most candidates correctly identified the claim as being false, having recognised that one of the students in the table played the drums as a hobby and had a job delivering newspapers. Those who incorrectly identified the claim as being true could gain credit in part (ii) by identifying an accurate pattern in the data that was consistent with the claim being true.

Question 3 (c):

Most candidates correctly identified that the claim was false, because two out of four students does not represent a majority. Those candidates who thought that 50% does represent a majority could not be credited in either part of the question. An alternative good answer was to say that the claim is false, because the sample is too small to make such a large generalisation, but this answer was offered by very few candidates.

Question 3 (d):

Many candidates achieved all four marks. The most popular incorrect response was to identify Riding as the hobby of New Student X.

Question 4 (a) and (b):

Most candidates achieved both marks for this question.

Question 5 (a), (b) and (c):

Many candidates completed the matrix puzzle, appearing to be familiar with this type of exercise. Centres may find further examples of matrix puzzles in the support materials for Skill 9.

Question 6 (a), (b) and (c):

The intention was that candidates should quote evidence precisely, although a considerable degree of latitude was given in the marking, where candidates clearly selected the correct piece of evidence.

In parts (a) and (b), good answers were those that recognised the significance of the words “challenge” and “support”.

Section B

Question 7:

Many candidates were credited with one mark by identifying that the belief in life after death is “just an opinion” or that there is a lack of evidence. Good answers went on to develop this idea, for example by suggesting that further evidence would be required to accept Anita’s conclusion. An alternative approach was to identify that Anita’s reasoning relied on an assumption. This answer could be developed by explaining what the assumption was, for example that what people believe is actually true.

A further valid approach was to identify an appeal to popularity or tradition and these answers could be developed by explaining the irrelevance of the appeal.

Some candidates confused the appeal to tradition with the appeal to history. There was no appeal to history in Anita's reasoning, because she was not suggesting that there would be any repetition of events.

Question 8 (a) and (b):

Good answers were focussed on the credibility of the people who made the claims (about ghosts and out of body experiences). Good answers tended to use credibility criteria (Skill 4) to develop a relevant explanation.

Many responses were not credited because the answer given was very similar to that offered for Question 7. Such candidates tended to focus on the lack of evidence for the claims, the lack of corroboration or on alternative explanations, rather than on the credibility of those making the claims.

Other responses that were not credited were those where the candidate had focussed on the credibility of Anita, rather than on the credibility of those making the claims.

Question 9:

The majority of candidates correctly identified an ad hominem flaw, indicating familiarity with Skill 2 of the specification.

Question 10:

The analogy was complex, but a majority of candidates were, nevertheless, able to identify differences between the human body and a suit of clothes. Good answers were those which went on to explain how this difference made the analogy weak, by showing how a person's relationship with the body is more close or intimate than a person's relationship with clothes.

Question 11 (a) and (b):

As in previous sessions, candidates found the question about necessary and sufficient conditions challenging. It was more common for candidates to understand that Dhanish saw having thoughts and feelings as a necessary condition for possessing a soul than it was for candidates to explain that this was, for him, also a sufficient condition.

Question 12:

The most important factors in determining the level of response were the development and structure of the reasoning. Good answers had at least two developed reasons, with the response being clear and carefully structured. Those candidates who took the time to plan their arguments were often able to produce better structured responses.

Good answers explored key differences between computers, developing at least two lines of reasoning rather than identifying but not fully explaining a larger number of differences. Relevant evidence and well-chosen examples often strengthened the reasoning, but invented survey evidence rarely added to the quality of responses.

Counter-arguments were rarely used to good effect by the candidates because most of those who employed them seemed to want to be seen to be producing a balanced and fair-minded response rather than an argument. When asked to "develop an argument", candidates are not being invited to "sit on the fence". Counter-arguments will only strengthen an answer if the counter-reasoning is dismissed effectively.

Question 13:

As with Question 12, the most important consideration for the examiners was the quality and structure of the reasoning, with good answers having at least two relevant and developed reasons.

A small minority of candidates missed the word “challenge” in the question and argued in the wrong direction.

Many candidates chose to attack the “lots of people” aspect of the claim, arguing that the claim as a whole must be untrue because a precise figure had not been given, or because “lots” is not necessarily a majority. Some good answers did include a consideration of the vagueness of the word “lots”, but it was necessary for candidates to also consider the other aspects of the claim. Many candidates focussed on a lack of evidence, often developing their ideas in Question 7. Some good answers did explore the significance of the lack of evidence for the existence of ghosts but very often such responses were little more than an “argument from ignorance”, treating the absence of evidence as evidence of absence.

Several examiners observed that quite a few candidates included rhetorical questions in their answers that did not strengthen their reasoning. If candidates are to ask questions in their arguments, they should usually attempt to answer them.

Good answers tended to accept that at least some people do claim to have seen ghosts and argued that many or all of such claims are probably false. Good answers often used credibility criteria (especially vested interest and ability to perceive) to question the reliability of such reports. Many good answers also explored alternative explanations for strange occurrences.

B902 Thinking and Reasoning Skills Case Study

General Comments

The entry for the January 2012 sitting of Unit B902 saw a very significant increase in size compared with the previous January. There was a good range of centres entering candidates, although one very large centre dominated. The paper was accessible to all, differentiating effectively between candidates of varying ability. There was a normal distribution of marks achieved, although few very strong scripts were seen.

Most candidates would seem to have been well prepared for the examination and many demonstrated good familiarity with the topic, although often this seemed to be based more on personal experience than on the information and arguments contained within the pre-release materials. Comment has been made in previous reports to centres, especially June 2010, on the vital importance of centres using teaching time to work through the pre-release material and the Board has ensured that this is available many weeks before the exam is sat.

As well as opportunities to familiarise candidates with the documents, studying the pre-release materials should also be an opportunity to practise the skills assessed in the exam. It may, for instance, have been possible to identify the obvious analogy in document 6 and also the flaw in Mary's argument in document 1. The questions relating to these components on the paper were generally answered poorly, so time invested in looking for these sorts of elements in the documents is likely to be valuable.

Another feature of pre-release material is the fact that it is possible to include items in the documents for the case study which require an element of contextual understanding. No questions on the paper will ever require specialist knowledge, but an understanding of context can be expected when the documents have been seen and studied prior to the examination. In this paper, a number of candidates found it difficult to access some aspects of question 3 due to their very weak understanding of the election results given in document 5. Whilst marking did not penalise candidates who made technical errors concerning UK elections in their answers, an answer which is based on the belief that winning 0.4% of the constituency vote can deliver victory for a candidate is unlikely to be effective.

It is important once again, therefore, to emphasise the huge value to be gained in setting aside the 6 hours identified in the work schemes to study the pre-release materials in class.

Comments on Individual Questions

Section A

Question 1:

Answers to part (a) of this question were often disappointing, with less than a third of candidates correctly identifying both the conclusion and the word '*because*'. Whilst most candidates were able to identify the counter argument and its associated indicator word in parts (b) and (c), a significant minority believed the component to be a reason, example, or even an assumption. A surprising number of candidates seem to be finding difficulty with questions which test skill 1 in the specification, so centres should ensure that the elements of critical thinking involving the identification and understanding of simple arguments are well embedded.

Question 2:

This question proved to be problematic for candidates and two thirds of the entry failed to pick up any marks here. Significant numbers believed the flaw to be a 'slippery slope' or 'ad hominem' example. It would seem that candidates find it harder to identify a 'straw man' flaw, although those who correctly identified this were largely able to explain its presence successfully by reference to the original argument having been distorted or misrepresented.

Question 3:

Part (a) of this question was generally well answered. Candidates proved able to apply aspects of skill 9 to identify the missing candidate and many also gained full marks for their explanation. Part (b) was less well answered, with many candidates failing to make use of the evidence given in document 5, despite the instruction to do this. Many candidates were also held back by their lack of understanding of election results mentioned above. Even where candidates were confident with the context of the data, some were unable to draw conclusions from it. A significant minority of candidates did not attempt part (ii).

Part (c) was often poorly answered. The question required candidates to identify two further pieces of information. Unfortunately many chose information which was already available, such as how many people voted or the percentage of the vote won. A very small number of candidates gained full marks for this question.

Question 4:

This question proved to be a very good discriminator with many strong answers gaining full marks for effective application and explanation of credibility criteria. Less effective answers often gave very generic explanations of bias or expertise. Centres should encourage candidates to use specific detail in skill 4 questions when explaining credibility, such as '*Beth is a supporter of the Pirate Party, so will be biased*', rather than very general comments such as '*Beth only supports one side*'. There was confusion between 'reputation' and 'expertise' in some weaker answers. Centres should also stress to candidates that 'ability to observe' means having access to relevant information in order to make a credible report or judgment about something. It is not the ability to see things from both sides; this is 'neutrality'.

Question 5:

Most candidates were able to identify Beth Bennett as the correct answer and were then able to explain why, using such information as Beth being the only choice who was opposed to the Digital Economy Act (DEA). Some weaker answers merely suggested that Beth agreed with John Jones, which was just repeating the question and could not be credited.

Question 6:

Most candidates were able to identify the correct usage of the word 'fair' in part (a). A good majority of candidates were able to access at least one mark for part (b), but many missed out on the second mark. Here candidates were expected to contrast the Pirate Party's aim for the *artist* to be the sole beneficiary with Anna's statement that *record producers* have every right to claim money as well.

Question 7:

Candidates have often found analogy questions difficult to answer in past papers and this proved to be the case again. A large majority were able to identify a similarity in part (a), but fewer were successful with part (b). With only one mark available, examiners were not looking for anything too sophisticated, but it did have to be relevant to the analogy. Answers such as '*you listen to music, but you eat a cake*' are not going to be awarded a mark, whereas '*copying a CD is illegal, but making a cake from a recipe isn't*' was ideal.

Part (c) proved to be the least well answered question on the paper. Many candidates simply repeated a similarity or difference which they had already given, which could not be credited. Again, nothing overly sophisticated was being looked for here. A very generic comment about

the differences outweighing the similarities (or vice versa) was sufficient to gain one mark. For both marks examiners were looking for an answer which focused on the relevance of the analogy to the argument that copying music should be free. Very few candidates were able to provide this.

Question 8:

This question was also a very good discriminator. A large number of answers to both parts of the question were awarded two marks, but only the strongest answers here reached full marks across both parts. The key to this question was a simple structure which stated the counter claim and then supported this with a reason. For full marks the reason had to be developed a little. A useful way of thinking about this might be to see the counter claim as a main conclusion and the development as an intermediate conclusion derived from the reason. Perhaps because question 1(c) identified '*although*' as an indicator word for a counter argument, many candidates started their answer in this way, but often this then prevented them from clearly stating the counter claim and limited their answer to a maximum of two marks.

Section B

Question 9:

This was a generally well answered question with many candidates gaining all four marks. Successful answers made use of sections 3 to 6 of document 2 and quoted the claims verbatim. Paraphrasing claims in a question like this can sometimes result in changing the meaning of a claim and thus losing the mark. Less successful answers referred to claims from section 1 of document 2 about how the Act would work, which didn't provide reasons that the Act was a bad idea. A small minority of candidates ignored the instruction to use document 2 entirely and thus gained no marks.

Question 10:

Candidates mostly produced fairly lengthy answers to this question and made good attempts at demonstrating their AO3 skills. There were relatively few level 1 answers seen, but equally examiners did not see many at level 3 either. Candidates tended to bunch in level 2 because they were able to produce an argument with reasons which supported the opposition of the Pirate Party to the DEA, but which failed to develop these reasons sufficiently to warrant a level 3 mark. Less successful answers tended to take the form of a rant rather than an argument with good reasoning. Comments about AO3 made on the previous two reports to centres should be referred to for further guidance on extended answer questions in section B of this paper.

Question 11:

Most candidates were able to identify a fair alternative punishment in part (a). The most common suggestion was some sort of fine and this was then often developed well in part (b) as an appropriate punishment for an illegal act which was akin to stealing. A number of answers to part (a) failed to gain a mark because they were either repeating punishments already suggested in the root of the question or because they did not constitute 'punishments'. We did not consider the suggestion of 'the death penalty' to fall within the bounds of fairness asked for in the question!

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