

Level 2 Award

Thinking and Reasoning Skills

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

OCR Report to Centres June 2015

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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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B901 Thinking and Reasoning Skills

General Comments:

The question paper performed well and most candidates are now familiar with the language of this qualification. In this session, the overwhelming majority of candidates were familiar with terminology relating to flaws, credibility criteria and indicator words. Nevertheless, surprisingly few were able to use the word 'analogy'.

In Section A, candidates found the necessary and sufficient conditions question particularly challenging. Candidates were much more successful in identifying and explaining flaws in reasoning.

In Section B, many candidates would have benefitted from a clearer understanding of what this qualification understands by an 'assumption', as many quoted from the text.

As always, when developing their own reasoning, the more successful candidates were those who used structure and developed reasons.

Comments on Individual Questions:

Question No. 1

In part (a), the majority of candidates were successful in underlining the whole of the conclusion. A small minority incorrectly underlined the first sentence.

The overwhelming majority were able to circle the indicator word 'therefore'. This suggests that the term 'indicator word' is now well understood by the candidates.

In part (b), successful candidates were those who correctly circled Map B. Not all of those who did so were able to go on to explain that the reasoning was joint. Less successful candidates simply observed that there were two reasons supporting the conclusion but not that the reasons depended on each other.

In part (c), alternative choices had to relate to gambling and they had to be alternatives to raising the lottery age to 18. Doing nothing (i.e. keeping the age at 16) was a valid alternative to that mentioned in the argument.

In part (d), there are still some candidates who use credibility criteria when asked for criteria to choice, although this error was less common than in previous sessions. Some generic 'criteria' for choice are effectiveness, cost, practicality, public safety, popular opinion and ease of implementation.

In part (e), less successful candidates gave reasons that were assertions rather than reasons. Such answers did not gain credit, particularly when they did not relate to age. Successful answers tended to relate to the maturity of 18 and 16 year olds.

In part (f), few candidates successfully answered that buying a lottery ticket is neither a necessary nor a sufficient condition of gambling. Most felt that buying a lottery ticket was a sufficient condition for gambling. Most of those who did select the correct answer failed to explain it. In part (ii) candidates were credited for explaining either the necessary or the sufficient aspect of the question. Many unsuccessful candidates failed to relate their answers to the lottery, for example by observing that spending money was not a necessary condition of gambling.

Question No. 2

The matrix question proved very accessible with most candidates achieving all three marks for linking the colour to the driver.

In part (d), successful candidates gave a reason why Devante's car may be damaged that did not relate to its colour. The most popular incorrect answer challenged the premise of the question, for example by saying that there was insufficient evidence to support it.

Question No. 3

The venn diagram question performed well as a discriminator.

In part (a), the most popular incorrect answer was 12. In part (b), the most popular incorrect answer was 17. These less successful candidates clearly need to focus on the word 'only'.

In part (c), the most popular incorrect answer was 6. Such candidates presumably added $12+17+5$ and subtracted from 40.

In part (d), the flaw 'false dilemma' was familiar to most candidates.

Question No. 4

In part (a), surprisingly few candidates were able to use the term 'analogy'. There was a significant number of candidates who left the question unattempted. 'Straw man' was a popular incorrect response.

In part (b), most candidates recognised the flaw as 'slippery slope'. Some candidates failed to achieve the second mark because they could not explain the flaw fully. Candidates should be aware that a slippery slope is more than just a sequence of events. The flaw occurs when the jumps from one event to the other are too big or too extreme.

In part (c), successful candidates were able to offer reasonable explanations for Mr Jones having to wait. Popular successful answers included the suggestion that other patients may have been more urgent cases or that they were seen by another doctor.

Question No. 5

Candidates were more successful at identifying patterns than in previous sessions. Successful candidates recognised patterns that linked details in more than one column.

When identifying weaknesses in the survey, the more successful candidates described the limitations of the sample size or the representativeness of the sample. Less successful candidates suggested that it was a weakness that the ages of the patients or the length of time spent with the doctor was imprecise. The purpose of the survey was to investigate how long the doctor was spending with patients, so it was not a weakness that some patients' ages were recorded as 'Teenager' rather than the precise age being given.

Question No. 6

In part (a) Many candidates identified 'appeal to tradition' and were successful. Other candidates were successful because they were able to explain the appeal to tradition without using the terminology. The response 'Appeal to history' was not credited because the appeal was not about events being repeated.

In part (b), the overwhelming majority of candidates underlined the conclusion correctly but far fewer were able to identify an assumption. The majority of unsuccessful answers simply repeated part of the text, for example, 'wind turbines at sea could interfere with my plane's radar system'. Candidates should be aware that this subject regards an assumption as an unstated reason and so it must be something the author has not said.

In part (c), candidates who took time and care were often able to achieve five marks for completing the venn diagram. The most common mistake seemed to be with the position of statement 1. Only Document B considered wind turbines to be a good idea.

In part (d), successful candidates recognised that Document D was the view of an environmental scientist and this qualification strengthened the author's credibility when discussing the impact on wildlife.

In part (e), many candidates recognised that the owner of the hotel has a motive to protect his business. Few, however, added that this gave him a motive to misrepresent the truth which is why vested interest weakens his credibility.

In part (f), ability to see was selected by the successful candidates with incorrect responses being equally distributed between the remaining options.

In part (g), bias was correctly selected by the overwhelming majority.

Question No. 7

As always, the strength of the reasoning and the extent to which reasons were developed was the main factor determining the marks candidates received. Candidates in the top mark band are expected to offer at least two developed reasons.

A developed reason is likely to include the use of indicator words. An undeveloped reason is likely to invite the response, 'and so...'

In this question, candidates were invited to write their argument in the form of a letter. The examiners were surprised to see that many candidates included their names, full postal addresses and even telephone numbers.

Many candidates related their reasoning to their home areas to argue that wind turbines were inappropriate for their location. This was an acceptable line of reasoning.

Successful candidates structured their arguments. Candidates are strongly encouraged to separate their reasons into distinct paragraphs.

Some candidates tended to rant, using rhetorical techniques perhaps encouraged in English lessons on 'persuasive writing'. Candidates should be aware that Thinking and Reasoning Skills encourages arguments that are rather more logical, carefully reasoned and moderate in tone.

Some candidates included counter-arguments. In this subject, counter-arguments are never necessary unless specifically asked for. If candidates do decide to include counter-arguments, they must remember to dismiss them. The purpose of a counter-argument is always to knock it down.

Question No. 8

There were some 'wrong way' answers, when candidates did not read the question carefully enough.

As in Question 7, candidates who used paragraphs tended to produce more coherent arguments.

Many candidates identified ways in which humans are superior to other animals but there was often a lack of comparison and a failure to explain the significance. The most successful candidates were able to explain why a certain characteristic was equated to 'importance'.

B902 Thinking and Reasoning Skills Case Study

General Comments:

It was pleasing to see many strong performances for the June season in the B902 paper, with candidates engaging positively with the topic of Tutankhamen and the curse of the tomb. It was apparent from many candidates' answers that they had thought quite deeply about the issues arising from the pre-release material and this both enlivened and focused their responses when the questions invited developed reasoning.

The vast majority of candidates were able to use the language and vocabulary of thinking and reasoning both accurately and effectively in many of their answers. This is always welcomed and makes the awarding of marks more straightforward. However, it remains the case that candidates who are able to use their own way of explaining key issues will also be rewarded. This was seen for instance in Q.11(b) where some answers attracted the mark straight away by identifying that this was a false appeal to history, where other candidates gained the mark with an equally valid explanation that just because people reacted one way 90 years ago, it doesn't mean they would do the same now.

In the questions testing candidates' AO3 skills to present and develop their own arguments, there were opportunities to go some way beyond the material presented in the documents and there were a number of scripts seen where this was taken up with some alacrity. It is always good to see answers where developed reasoning takes the answer into relevant areas not covered by the documents and this will always be rewarded where it addresses the question and the skills being assessed.

Candidates continue to find it more difficult to identify assumptions in arguments than to spot other argument components and this was demonstrated in responses to Q.2 and Q.5(b). Centres should continue to remind candidates that, because assumptions are something which is missing from an argument, a correct answer to a question testing this skill can never be any wording lifted from the argument itself.

Whilst the weighting for AO2 marks is higher on the B901 unit, there will always be 12-15 marks testing these problem solving and wider thinking skills on B902. These skills will often be tested in higher tariff questions which will take a little bit of time for candidates to think through their answers. On this paper, it was clear that this had been done as there were very good marks achieved in questions 6 and 9. It is always worth the time invested thinking carefully about these sorts of questions and it was very pleasing for Examiners to be able to reward many candidates with 10 marks across these two questions.

Comments on Individual Questions:

Section A

Q1 (a) It is very common for the B902 unit to begin with a question requiring candidates to mark-up an argument and/or to identify the structure of an argument. In this case candidates found it more straightforward to identify the main conclusion than to pick out the intermediate conclusion. In the latter case, the mark scheme required candidates to bracket the whole of the second sentence up to the word '*because*'. Whilst there will sometimes be some leeway with credit still being given if some words are missed out, in this instance leaving any elements out would not have indicated a proper understanding on the reasoning involved. Candidates who included the second part of the sentence in the brackets could not be credited as they were adding a reason to the intermediate conclusion. The vast majority of candidates correctly identified the indicator word in part (iii).

- Q1 (b) Most candidates recognised that the second of the two argument maps represented the structure of the argument and nearly all who did this were able to follow this up with a valid explanation which identified joint reasoning or the requirement for both reasons to be included for the conclusions to be drawn.
- Q2 As can often be the case with assumptions questions, this one proved to be difficult for many candidates. The best answers were able to identify that, for the reasoning to work, it was necessary to say that Jothan was assuming that the ancient Egyptians only put curses on the tombs of some pharaohs or on those who reigned for a long time. A number of responses were seen which lifted elements from the argument itself, such as '*that they wouldn't bother to put a curse on Tutankhamen's tomb*'. As stated above, such answers can never be correct when asked for an assumption.
- Q3 There has been a further improvement in candidates' ability correctly to identify common flaws in reasoning and most were able to spot the false dilemma here. It was also notable that the vast majority of those who identified the false dilemma were then able to explain their answer, most commonly by referring to the idea that Helen was restricting the options to just two, when more were clearly possible.
- Q4 Most candidates were able to gain some credit for their answers to this question. Some were able to gain both marks by identifying the weakness in the reasoning correctly as confusing correlation with cause. Some gained the same credit through longer answers identifying that there were alternative explanations for the mishaps which befell Julie's auntie, which were unrelated to her visit to the tomb. Slightly more common were answers which attracted one mark for answers which correctly suggested that these could have been coincidence, but which did not develop this by suggesting alternative causes.
- Q5 (a) The vast majority of candidates were able to identify elements of how the travel company's vested interest weakened the credibility of their claim. In order to gain both marks here, however, it was necessary to explain how they had an interest in dismissing the curse as a myth to prevent it scaring visitors away, as well as recognising that Travel Egypt would gain financially from selling holidays.
- Q5 (b) This question proved to be slightly easier than Q2 as a test of candidates' ability to identify an assumption. It was still the case however that fewer than half the scripts seen identified that it was necessary to assume that more people remember Tutankhamen than Rameses for the argument to be valid.
- Q6 This question was well answered with most candidates able to identify correctly that only conclusion (c) could be reliably drawn from the data. Part (b) proved just slightly more difficult, possibly because some candidates didn't take the time to look carefully at the whole data set to see that Howard Carter died at a younger age than some of the museum workers towards the bottom of the table.
- Q7 Most candidates were able to provide one reason which challenged Ollie's claim, though fewer could come up with two valid reasons. Many successful answers focused on the idea that either the toxins or the curse could have been long lasting or slow working and could result in a more prolonged and potentially more painful death. There were also valid answers which suggested that Carter might have been immune or taking some sort of medication to ward off the toxins. It was not felt to be valid to suggest that Carter might not have been exposed to either the toxins or the curse as his position as lead archaeologist on the excavation makes it implausible to believe that he would have had less exposure than others.

- Q8 This was a relatively straightforward credibility question and it was pleasing to see candidates responding accordingly and often getting full marks across the two parts of the question. The most common criteria chosen were expertise, where candidates correctly focused on his role as an Egyptologist and his ability to apply this relevantly to the claim he was making, and reputation, where candidates picked on the fact that he was a '*respected*' Egyptologist and developed this a little. It was, however, also possible to use neutrality or the lack of vested interest by focusing on the fact that he was not involved in the excavation and had nothing to gain from what he was claiming.
- Q9 This question was very successfully answered, with candidates being well rewarded for taking their time to scan the newspaper articles for the statements given. Very few candidates were able to match fewer than four statements correctly and most placed at least five in the correct area of the Venn Diagram. It is possible that greater familiarity with the documents from studying them carefully in pre-release form helped candidates to do so well on this question.
- Q10 This question proved by some distance to be the most challenging on the paper. Very few candidates were able to gain any credit and only a very small minority gave answers which attracted both marks. The key to answering questions which require candidates to explain a weakness in the link between the evidence and the conclusion is to begin by correctly identifying these two elements. It was hoped that by specifically highlighting the conclusion in the stem of the question that this would be made more straightforward. The most successful answers clearly recognised the difference between the conclusion's focus on those who entered the tomb and the focus of the evidence on the unwrapping of the mummy. Less successful approaches were far less specific and talked about lack of proof or contradiction between mentioning the curse and then saying it didn't exist. Neither of these types of answer could be credited. Centres should stress to candidates that a careful reading of the wording of the conclusion and the evidence or reasoning is likely to be the best route to success on questions assessing skill 5.
- Q11 Candidates found it harder to identify and explain the false appeal in this argument than they had to identify and explain the false dilemma in Q3. Having said this, false appeal was the most common response chosen and as highlighted in the general comments, a number of different, but equally successful explanations were given to justify this choice. Whilst the specification does require candidates to be able to identify false appeals, it is not necessary to provide a specific label as to what sort of false appeal it is, so a more descriptive explanation will always be rewarded if it captures the weakness in reasoning being displayed.
- Q12 Questions assessing candidates' ability to clarify the meaning of ethical concepts appear quite frequently on B902 papers and such questions often pose difficult challenges. This was not the case here as the vast majority of candidates were able to see that 'fair' in this case was used to mean giving everyone an equal chance. It was less straightforward to then justify why it was fair to give exclusive rights to The Times. The most successful answers focused on the idea that it was fair for Carter and Carnarvon to grant the exclusive rights because they had done all the work and it was up to them what they did with the information gained. Less successful approaches focused on the benefits for The Times or on supposition about newspaper making the first contact or paying a substantial sum for the rights. Neither if these ideas are supported by the documentation so they couldn't be credited as relevant or valid, as required by the mark scheme.

- Q13 This question was well answered, with very few candidates failing to identify at least one valid criterion. Common answers mentioned cost, ethics or available resources in one form or another. A small minority of candidates read the term criterion as meaning they needed to provide credibility criteria and these answers could not be credited.
- Q14 This question discriminated well and it was pleasing to see candidates who were familiar enough with the pre-release material to develop a strong argument. There were very few responses which fell below Level 2, although there was also a shortage of really good Level 3 answers as well. The most successful answers were those which developed reasons beyond the evidence presented in the document to support their conclusion. Strong Level 3 answers were seen on both sides of the argument and it was equally possible to produce high scoring responses either for or against de-extinction. Other candidates selected relevant evidence and arguments from the documents and structured these to support their conclusion. This was a feature of many Level 2 responses. A small minority of responses presented balanced arguments, with some reasoning in favour and some against. This was not what was asked for and Centres should make it clear to candidates that their reasoning skills and ability to attract AO3 marks are best achieved by presenting a clear response which supports a decisive conclusion.
- Q15 (a) This was a well answered question which demonstrated candidates' ability to present developed reasons effectively. It was pleasing to see that candidates understood the need to go beyond simple reasons such as 'Scientists would be able to study them' and to add the 'so what?' element to this, such as '.....which would teach us more about how primitive man lived and evolved.' The majority of responses successfully produced at least one developed reason and focused successfully on supporting the key point about the use of an uninhabited island. Less successful answers often produced more general reasons in support of the de-extinction of Neanderthals or, in some cases, gave reasons which opposed the course of action suggested. The latter could not be credited.
- Q15 (b) This question was well answered by many and, like question 14, saw the majority of responses banded in Level 2. A number of strong Level 3 answers successfully demonstrated developed reasoning which specifically focused on the negative aspects of the use of a deserted island. Such a sharp focus on the conclusion is always likely to reap the best rewards and this was certainly the case here. Level 2 answers tended to produce more general reasons and lack development, although reasoning skills were clearly evident. Few answers fell below Level 2 and these were usually very short, although there was little evidence of candidates running out of time at the end of the paper.

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