

## **Level 2 Award**

### **Thinking and Reasoning Skills**

Unit 2 **B902**: Thinking and Reasoning Skills Case Study

OCR Level 2 Award

### **Mark Scheme for January 2014**

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

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

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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

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## 1. Annotations

Annotation	Meaning
	Unclear
	Benefit of doubt
	Caret sign to show omission
	Cross
	Development
	Significant amount of material which doesn't answer the question
	Level 1
	Level 2
	Level 3
	Level 4
	Not answered question
	Benefit of doubt not given
	Page seen

## 2. Subject-specific Marking Instructions

- 1.1 Marking must be positive. Marks must not be deducted for inaccurate or irrelevant answers. Half-marks must not be used.
- 1.2 The full range of marks should be used. Do not be afraid to award full marks or no marks. Failure to do this will seriously affect the distribution of marks.
- 1.3 Be consistent from script to script and from batch to batch.

- 1.4 It is not possible to cover every possible type of response within a levels of response mark scheme and examiners are expected to use their professional judgement at all times in ensuring that responses are placed in the correct levels and given an appropriate mark within that level.
- 1.5 If a candidate reaches a particular level s/he must be rewarded with a mark within that level. It is not necessary to work through the levels.
- 1.6 Where a band of marks is indicated for a level these marks should be used with reference to the development of the answer within that level. Decide the appropriate level first and then mark within that level.
- 1.7 The mark scheme primarily aims to reward the demonstration of the skills. **Where examples are given these are not prescriptive but intended as a guide.** If in doubt refer to your team leader.

#### **Crossed out and duplicated answers**

##### **Crossed Out Responses**

Where a candidate has crossed out a response and provided a clear alternative then the crossed out response is not marked. Where no alternative response has been provided, examiners may give candidates the benefit of the doubt and mark the crossed out response where legible.

##### **Short Answer Questions** (requiring only a list by way of a response, usually worth only **one mark per response**)

Where candidates are required to provide a set number of short answer responses then only the set number of responses should be marked. The response space should be marked from left to right on each line and then line by line until the required number of responses have been considered. The remaining responses should not then be marked. Examiners will have to apply judgement as to whether a 'second response' on a line is a development of the 'first response', rather than a separate, discrete response. *(The underlying assumption is that the candidate is attempting to hedge their bets and therefore getting undue benefit rather than engaging with the question and giving the most relevant/correct responses.)*

##### **Short Answer Questions** (requiring a more developed response, worth **two or more marks**)

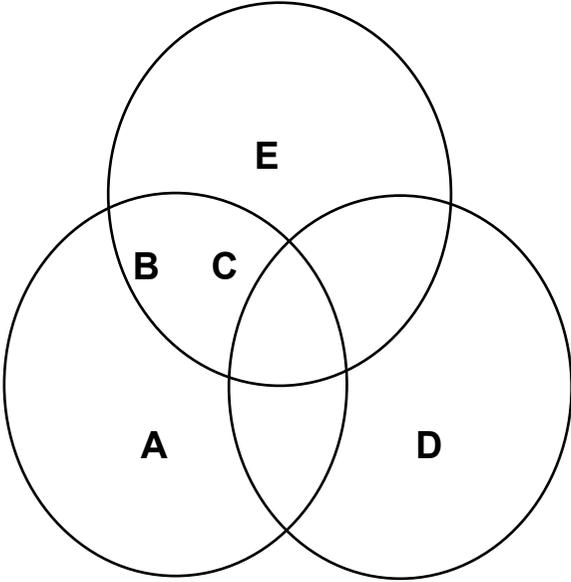
If the candidates are required to provide a description of, say, three items or factors and four items or factors are provided, then mark on a similar basis – that is downwards (as it is unlikely in this situation that a candidate will provide more than one response in each section of the response space.)

Question		Answer	Marks	Guidance
1		Credit 1 mark for putting a tick next to 'rant'.	1	Please follow the guidance on crossed out and duplicated answers.
2		Credit 1 mark for putting a tick next to 'explanation'.	1	Please follow the guidance on crossed out and duplicated answers.
3	(a)	Credit 1 mark for putting brackets around 'One day we will understand the science behind 'ghostly' sightings' or '(and) it is irrational to draw conclusions without evidence'.	1	Do not award the mark if the candidate has bracketed both reasons.
	(b)	Credit 1 mark for underlining '(so) we should object to using language like ghosts and paranormal'.	1	
	(c)	Credit 1 mark for circling 'so'.	1	Accept 'should'.  Do not credit 'and'.
4	(a)	Credit 1 mark for putting a tick in the 4 <sup>th</sup> box (Two reasons, an intermediate conclusion and a conclusion).	1	Please follow the guidance on crossed out and duplicated answers.
	(b)	Credit 1 mark for circling 'joint'.	1	
5		Credit 1 mark for putting a tick next to 'irrelevant appeal'.	1	Please follow the guidance on crossed out and duplicated answers.
6		<p>Credit 1 mark for stating 'ad hominem' or 'attacking the arguer' and 1 mark for an explanation which shows an understanding of the ad hominem flaw.</p> <p>2 mark examples:</p> <ul style="list-style-type: none"> <li>• It is ad hominem because it attacks the scientists not their reasoning.</li> <li>• It attacks the arguer not the argument by saying scientists are boring so we shouldn't take any notice of them.</li> </ul> <p>1 mark example:</p> <ul style="list-style-type: none"> <li>• It attacks the arguer.</li> <li>• Ad hominem.</li> </ul>	2	Simply identifying the part of the reasoning that is flawed is not enough to gain any credit. ' <i>There is nothing to back up that scientists are boring</i> ' would be 0 marks.

Question	Answer	Marks	Guidance
7 (a)	<p>Award 2 marks for identifying that refusing to believe people who claim to have seen a ghost is being compared with calling someone a liar when they say they watched Coronation Street on TV last night.</p> <p>2 mark example:</p> <ul style="list-style-type: none"> <li>• Refusing to believe someone claiming to see a ghost and refusing to believe someone claiming to have watched Coronation Street on TV.</li> </ul> <p>1 mark example:</p> <ul style="list-style-type: none"> <li>• Lying about ghosts is being compared with lying about watching TV.</li> <li>• Someone who claims to have seen a ghost is compared to someone who says they watched TV.</li> </ul> <p>0 mark example:</p> <ul style="list-style-type: none"> <li>• Seeing ghosts is being compared with watching TV.</li> </ul>	2	To be awarded two marks the answer needs to contain the element of the claim about refusing to believe in both cases.
(b)	<p>Award 2 marks for a clear, relevant statement of a difference.</p> <p>2 mark examples:</p> <ul style="list-style-type: none"> <li>• Someone is less likely to lie about watching a TV programme than about seeing a ghost.</li> <li>• Seeing a ghost is less plausible than watching Coronation Street on TV.</li> <li>• It is very hard to prove that someone has seen a ghost but much easier to prove they've watched something on TV.</li> </ul> <p>Award 1 mark for answers which identify a relevant difference but with less clarity or answers in which only one side of the analogy is referred to:</p>	2	

Question	Answer	Marks	Guidance
	<ul style="list-style-type: none"> <li>• People don't lie about what they watch on telly.</li> <li>• Seeing a ghost is more unlikely.</li> <li>• Ghosts are more farfetched than telly watching.</li> </ul> <p>0 mark examples:</p> <ul style="list-style-type: none"> <li>• Ghosts are made up but telly is real.</li> </ul>		
8	<p>Credit 1 mark for each clear and reasonable alternative explanation for <b>an increase</b>.</p> <p>Creditworthy examples include:</p> <ul style="list-style-type: none"> <li>• Increase in public media more likely to hear about them.</li> <li>• Less stigma attached to it.</li> <li>• More ghosts more dead people.</li> <li>• Fewer people religious so open to other ideas.</li> </ul>	2	Credit worthy answers must refer to some sort of <b><u>change</u></b> which has caused the increase to happen.
9	<p>(a)</p> <p>Credit 1 mark for each valid explanation of vested interest as a weakness.</p> <p>Creditworthy examples:</p> <ul style="list-style-type: none"> <li>• He makes money from people going on his ghost tours.</li> <li>• He organises popular ghost walks through Peterborough city centre.</li> </ul>	1	No marks for answers which explain how vested interest strengthens credibility, or for answers which refer to a different credibility criterion.
	<p>(b)</p> <p>Credit 1 mark for each valid explanation of how Sam's lack of expertise weakens his credibility</p> <p>Creditworthy examples:</p> <ul style="list-style-type: none"> <li>• He works in a museum and is therefore not an expert on the paranormal.</li> <li>• He's a history student with no experience of this subject.</li> </ul> <p>0 marks:</p> <ul style="list-style-type: none"> <li>• He's a history student.</li> </ul>	1	No marks for answers which explain how vested interest strengthens credibility, or for answers which refer to a different credibility criterion.

Question	Answer	Marks	Guidance
10	<p>Credit 1 mark for each tick in the correct box as follows:</p> <p>A higher percentage of women (compared to men) claim to have either probably or definitely seen a ghost</p> <p>YES</p> <p>There are more full-time students in the UK than unemployed people</p> <p>NO</p> <p>Men are less likely to visit haunted houses than women</p> <p>NO</p> <p>Less than half of the women who took part in the survey were definite about whether they had seen a ghost or not.</p> <p>YES</p>	4	

Question	Answer	Marks	Guidance
11		5	<p data-bbox="1590 231 1702 303">Paul Stevens</p>  <p data-bbox="1164 805 1299 877">Michael Persinger</p> <p data-bbox="1971 805 2072 877">Barrie Colvin</p>

Question		Answer	Marks	Guidance
12	(a) (i) (ii)	<p>Credit up to 2 marks for each clear and relevant reason 2 mark example:</p> <ul style="list-style-type: none"> <li>• It was taken before digital photography was invented, so it couldn't have been tampered with.</li> <li>• The ghost is clearly visible in the image, which makes it difficult to argue that it was anything other than the ghost.</li> <li>• It is backed up with the accounts of the people who took it.</li> </ul> <p>1 mark example:</p> <ul style="list-style-type: none"> <li>• It was taken before digital cameras.</li> <li>• Witnesses agree.</li> <li>• You can see the ghost.</li> </ul>	2+2	<p>2 mark explanations will be developed and probably make use of indicator words such as therefore, so, because.</p> <p>1 mark answers will be less clear and/or lacking development.</p> <p>No credit can be given for answers which apply credibility criteria here.</p>
	(b)	<p>Credit up to 2 marks for each clear and relevant reason 2 mark example:</p> <ul style="list-style-type: none"> <li>• The image is not so clear and is more likely to be a fault in the development of the picture.</li> </ul> <p>1 mark example:</p> <ul style="list-style-type: none"> <li>• It could be faulty.</li> </ul>	2	<p>2 mark explanations will be developed and probably make use of indicator words such as therefore, so, because.</p> <p>1 mark answers will be less clear and/or lacking development.</p>
13	(a)	<p>Credit 1 mark for underlining <u>(Although) the evidence for a scientific explanation of ghosts is strong.</u></p>	1	<p>No credit can be given if '<i>it does not explain poltergeists</i>' is also underlined.</p>

Question	Answer	Marks	Guidance
(b)	Credit 1 mark for each example of scientific explanation for ghosts given in document 6. Creditworthy examples include: <ul style="list-style-type: none"> <li>• Visual factors/low lighting.</li> <li>• Magnetic fields.</li> <li>• Draughts.</li> <li>• Delusions/drunkenness.</li> <li>• Effects on the brain.</li> </ul>	3	Only one reference to magnetic or electro-magnetic fields can be rewarded.
(c)	Award up to 3 marks for an argument supporting the view that scientific explanations do not explain Catherine's friend's poltergeist.  Marks are to be allocated in accordance with the performance descriptors below.  <b>Performance description for 3 marks: Level 3</b> <ul style="list-style-type: none"> <li>• The conclusion is precisely stated</li> <li>• A developed and relevant reason is provided for the conclusion.</li> <li>• The structure of the reasoning is clear and explicit and places minimal reliance on assumptions</li> <li>• Grammar, spelling and punctuation are good.</li> </ul> <b>Performance description for 2 marks: Level 2</b> <ul style="list-style-type: none"> <li>• The conclusion is clearly stated</li> <li>• A relevant reason is provided for the conclusion.</li> <li>• The structure of the reasoning is not fully explicit and does rely on some assumptions</li> <li>• Grammar, spelling and punctuation are adequate.</li> </ul> <b>Performance description for 1 mark: Level 1</b> <ul style="list-style-type: none"> <li>• The conclusion is imprecise and unclear</li> <li>• A reason is given but it offers only weak support for the conclusion.</li> <li>• Structure is either absent or minimal or unclear</li> <li>• Grammar, spelling and punctuation may be inadequate.</li> </ul>	3	Example of a Level 3 response:  Her friend's poltergeist cannot be explained by science because science only offers explanations for when people see ghosts, for example they have been influenced by magnetic activity, but magnetic activity does not cause things to move!  Example of a Level 2 response:  I think that Catherine's claim should be believed, because none of the explanations can say why objects were moving across the room and why it stopped after it was exorcised.  Example of a Level 1 response:  It stopped after there was an exorcism so there must have been a presence in that room.

Question	Answer	Marks	Guidance
14	<p>Marks are to be allocated in accordance with the performance descriptors below.</p> <p>The content for the arguments may be utilised and/or developed from the documents or may be independent of those documents.</p> <p><b>Performance descriptions for 7 to 10 marks: Level 3</b></p> <ul style="list-style-type: none"> <li>• The conclusion is precisely stated</li> <li>• Reasons are provided for the conclusion, which are persuasive, cogent and fully developed</li> <li>• The structure of the reasoning is clear and explicit and places minimal reliance on assumptions</li> <li>• Evidence and examples are provided which are both relevant and clearly strengthen the reasoning</li> <li>• Grammar, spelling and punctuation are good.</li> </ul>	10	<p>The main discriminator here in terms of levels is likely to be the quality of the reasoning.</p> <p>The candidates should all have had an opportunity to study the pre-release documents, so developed reasons should be expected in order to reach level 3, making use of evidence and/or examples drawn from the documents or introduced independently.</p> <p>Marks within the levels can be determined by the number of reasons provided and the extent of the evidence or examples provided.</p> <p><b>Example of a Level 3 answer:</b></p> <p>We shouldn't believe people when they claim to have seen ghosts. There are too many reasons to doubt the existence of ghosts to believe the accounts of so few people. Also, scientific explanations for most accounts are much more convincing. Firstly, it is very unlikely that ghosts exist. The idea of dead people's spirits wandering the earth goes against many religious teachings about the afterlife and so it is difficult for a religious person to believe someone when they say they have seen someone who died long ago. From a more scientific perspective, we know that people's brains shut down after they are dead and that their bodies decompose, so it seems too far-fetched to imagine that any aspect of a person can hang around.</p> <p>Secondly, the scientific explanations given by Wiseman and Persinger in Document 6 both agree that there is evidence of magnetic activity in relation to ghost sightings. If two different scientific studies both come to this conclusion separately, it seems quite likely that they are onto something.</p> <p>Therefore, people who claim to have seen a ghost are mistaken and shouldn't be believed. (10 marks)</p>

Question	Answer	Marks	Guidance
	<p><b>Performance description for 4 to 6 marks: Level 2</b></p> <ul style="list-style-type: none"> <li>• The conclusion is clearly stated</li> <li>• Reasons are provided for the conclusion, which are plausible and relevant</li> <li>• The structure of the reasoning is not fully explicit and does rely on some assumptions</li> <li>• Evidence and examples are provided which are relevant but are open to challenge</li> <li>• Grammar, spelling and punctuation are adequate.</li> </ul> <p><b>Performance description for 1 to 3 marks: Level 1</b></p> <ul style="list-style-type: none"> <li>• The conclusion is imprecise and unclear</li> <li>• Reasons are undeveloped and only provided weak support for their conclusion</li> <li>• Structure is either absent or minimal or unclear</li> <li>• Evidence and examples are poorly developed or explained and are open to obvious counter examples and objections</li> <li>• Grammar, spelling and punctuation may be inadequate.</li> </ul> <p><b>0 marks – no creditworthy material</b></p>		<p><b>Example of a Level 2 answer:</b>  We should only believe people who say they've seen ghosts if they have good evidence to back it up. Most accounts of ghost sightings are not very believable, for example the ones from Peterborough in Document 4. There are lots of other explanations for someone hearing voices outside their house! If they take a photograph then they need to be able to prove that it hasn't been altered or faked by getting a photographic expert to check it properly before they show it to anyone. It is more likely that a ghost sighting is caused by drugs or by low lighting or magnetic activity. (6 marks)</p> <p><b>Example of a Level 1 answer:</b>  In my opinion it is silly to believe in ghosts. Science has proved that they are because of drugs and alcohol and the 999 calls in Peterborough just go to show how gullible some people are. (2 marks)</p>

Question		Answer	Marks	Guidance
15	(a) (i)	<p>Award up to 2 marks for a developed, reasonable explanation for the child thinking a ghost was trying to enter through a window.</p> <p>2 mark examples:</p> <ul style="list-style-type: none"> <li>• The child was probably having a bad dream because of the trauma of the burglary.</li> </ul> <p>1 mark examples:</p> <ul style="list-style-type: none"> <li>• It was a nightmare.</li> </ul>	2	
	(ii)	<p>Award up to 2 marks for a developed, reasonable explanation for the caller hearing ghost noises.</p> <p>2 mark examples:</p> <ul style="list-style-type: none"> <li>• The 3 males were trying to break in and what she heard was them talking.</li> </ul> <p>1 mark examples:</p> <ul style="list-style-type: none"> <li>• It was the 3 males.</li> </ul>	2	
	(b)	<p>Marks are to be allocated in accordance with the performance descriptors below.</p> <p><b>Performance descriptions for 5 to 6 marks: Level 3</b></p> <ul style="list-style-type: none"> <li>• The conclusion is precisely stated</li> <li>• At least one reason is provided for the conclusion, which is persuasive, cogent and fully developed, which could be supported by evidence or examples.</li> <li>• The structure of the reasoning is clear and explicit and places minimal reliance on assumptions</li> <li>• Grammar, spelling and punctuation are good.</li> </ul> <p><b>Performance description for 3 to 4 marks: Level 2</b></p> <ul style="list-style-type: none"> <li>• The conclusion is clearly stated, though not necessarily precisely focused.</li> <li>• At least one reason is provided for the conclusion, which is plausible and relevant</li> </ul>	6	<p><b>Example of a Level 3 answer:</b></p> <p>I don't think that police are wasting their time investigating calls involving ghosts. This is because the caller may be suffering from some kind of mental illness and may need medical attention, or they may be the victim of a nasty prank or break-in which could be a police matter anyway. The police have a duty to make all people feel safe, so if someone is in distress the police should investigate and, if necessary, reassure them. (6 marks)</p>

Question	Answer	Marks	Guidance
	<ul style="list-style-type: none"> <li>• The structure of the reasoning is not fully explicit and does rely on some assumptions</li> <li>• Grammar, spelling and punctuation are adequate.</li> </ul> <p><b>Performance description for 1-2 marks: Level 1</b></p> <ul style="list-style-type: none"> <li>• The conclusion is imprecise and unclear</li> <li>• The reason(s) provides very weak support for the conclusion</li> <li>• Structure is either absent or minimal or unclear</li> <li>• Grammar, spelling and punctuation may be inadequate.</li> </ul>		<p><b>Example of a Level 2 answer:</b>  I think that this claim is true. Even if the calls are not really about ghosts they may be about anti-social behaviour that the caller has misinterpreted. It is the police's duty to investigate every incident that is reported, so the police are not wasting their time when they look into every ghostly call. (4 marks)</p> <p><b>Example of a Level 1 answer:</b>  People could be taking hallucinogenic drugs, which is a crime so they should go. (2 marks)</p>

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