

Level 2 Award

Thinking and Reasoning Skills

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

OCR Level 2 Award

Mark Scheme for January 2017

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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.

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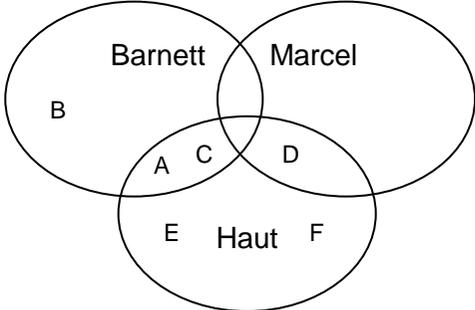
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Question			Answer/Indicative content	Mark	Guidance
1	(a)	(i)	Credit 1 mark for circling 'So' in the final sentence	1	If the word 'so' in the first sentence (<i>'it is so long ago'</i>) is circled, no credit can be given as this is not a conclusion indicator word.
		(ii)	Credit 1 mark for putting brackets around either of the following reasons: <i>(because) the government has given plausible explanations for the sightings and the debris</i> <i>it is so long ago now that we would know about it if it were true.</i>	1	Candidates who put brackets around the whole sentence (containing both reasons) should not be awarded a mark.
	(b)	Credit 1 mark for selecting the fourth box as the correct answer (Two reasons and two conclusions).	1	Please follow the guidance on crossed out and duplicated answers.	
2	(a)	(i)	Credit one mark for each correctly identifying the flaw as: <ul style="list-style-type: none"> Restricting the options/false dilemma 	1	
		(ii)	Credit one mark for a clear description of a false dilemma flaw <ul style="list-style-type: none"> He makes it sound as if there are only two things you can believe which isn't true. Two options are given, but there are more options available These are not the only options They have not considered other possible options 	1	
	(b)	(i)	<ul style="list-style-type: none"> Slippery slope 	1	

Question	Answer/Indicative content	Mark	Guidance
	(ii) Credit one mark for a clear description of a slippery slope flaw <ul style="list-style-type: none"> • He reaches an exaggerated conclusion too fast. • It jumps to an extreme conclusion without any reasons. • It makes a ridiculously exaggerated argument from little evidence. • There are big gaps in his argument so he jumps from a reason to a conclusion. 	1	Credit answers which identify the key component of a slippery slope flaw, that the argument moves from a reasonable starting point to an extreme or over exaggerated conclusion. Answers which simply state that the argument 'jumps to conclusions' should not be credited, unless there is reference to these conclusions being too extreme. No credit can be given for: <ul style="list-style-type: none"> • They are skipping to the conclusion that if aliens were real they would harm us This is a descriptive answer without identifying the problem.
3	(a)	1	
	(b)	1	
	(c)	1	The mark can be awarded even if only one side of the analogy is explicitly referred to, as long as there is a clear implied difference from the unreferenced side. Credit cannot be given for answers which are simply based on the Pyramids being more popular than Roswell as this misses the focus of the analogy.

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	<ul style="list-style-type: none"> • There is evidence to support the pyramids but not for the aliens at Roswell • The pyramids are really famous and a well-known tourist attraction 		
4	<p>Credit 1 mark for each reasonable, alternative explanation</p> <p>Creditworthy examples:</p> <ul style="list-style-type: none"> • He thought there were bits of it he could use later • He might have been keeping it for firewood so needed to keep it dry under cover • He might have thought it was valuable • He didn't want anyone else to find it • He might have wanted to fix it up • He might have been in a hurry and was keeping it till he had time to see what it was. • He might have suspected it was top-secret spying equipment. • The debris was in his way so he needed to move it • He put it there so he could dispose of it later • He didn't know what it was and he didn't know what to do with it 	1+1	<p>Answers can only be credited if they are clear alternatives to the explanation given. So answers which imply that Brazel thought the debris did come from a flying saucer cannot be credited.</p>
5	<p>Credit 1 mark for ticking 'Expertise' and 1 mark for ticking 'Reputation'.</p>	2	<p>Please follow the guidance on crossed out and duplicated answers.</p>
6	<p>Award up to 2 marks for each clear and developed explanation of a weakness related to a relevant credibility criterion.</p> <p>Award 1 mark for an answer that lacks clarity or for a partial but clear explanation.</p> <p>2 mark examples:</p>	2+2	<p>The marks are to be awarded for the quality of the explanation, which may be weakened by the absence of a correctly named criterion or one that does not match the explanation. A good explanation that is clear without naming a criterion can still attract 2 marks.</p> <p>The question relates to the credibility of the uncle's claim, so answers which focus on Tommy Magnum's credibility cannot be credited.</p>

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	<ul style="list-style-type: none"> • Vested interest – he went on to write a book about his ‘experiences’ so he could gain financially from telling lies. • Ability to see – he was at a music festival so he may have been on drugs. • Vested interest – Uncle Joe’s claim is weak because he was just after fame and popularity <p>1 mark examples:</p> <ul style="list-style-type: none"> • Vested interest – He would become more popular • He was probably high on magic mushrooms 		<p>The question asks for two different explanations of credibility, so the same criterion can be used for both – for example if vested interest was used for both answers then credit could be given for both is one answer focused on financial gain and the other on popularity and fame.</p>
7	<p>Award up to 2 marks for each clear and developed explanation of a strength or weakness that shows an understanding of ability to see as a credibility assessment criterion.</p> <p>2 mark examples:</p> <ul style="list-style-type: none"> • He did not have good ability to see because he was so far away • Ability to see weakens the claim because he only saw it for less than a minute. • He has good ability to see because he saw this first hand with his own eyes at the time. <p>1 mark examples:</p> <ul style="list-style-type: none"> • He has the ability to see as he was there when it happened • He was too far away • He was there at the time • It was late at night • It was too quick to see 	2	<p>For both marks to be awarded it must be clear whether ability to see is strengthening or weakening the claim.</p> <p>Answers which focus simply on the quality of the evidence provided cannot be credited as these are not related to credibility and the ability to see.</p>

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8	<p>Credit up to 2 marks for a clear, relevant explanation of a weakness.</p> <p>2 mark examples:</p> <ul style="list-style-type: none"> • The Roswell event was in 1947 but this evidence is from years after that, so it isn't relevant. • The evidence might be used to provide an alternative explanation for the sightings but it can't prove there were no aliens. <p>1 mark examples:</p> <ul style="list-style-type: none"> • The crash happened in 1947. The testing didn't begin until 1950 • It happened after 1947. 	2	<p>1 mark answers will lack development and/or clarity</p> <p>For both marks to be awarded to answers which reference the discrepancy in the dates, there needs to be a clear focus on the <u>relevance</u> of this discrepancy.</p>
9	<p>Credit 1 mark for each correctly placed letter as follows:</p> <p>A = Barnett and Haut B = Barnett only C = Barnett and Haut D = Marcel and Haut E = Haut only F = Haut only</p> <p>No credit can be given if any letter is included in more than one section of the Venn Diagram</p>	6	<p>Please follow the guidance on crossed out and duplicated answers.</p> 
10	<p>Credit 1 mark for each tick in the 'cannot be drawn' column</p>	2	<p>Please follow the guidance on crossed out and duplicated answers.</p>
11	<p>Credit 1 mark for putting a tick next to 'explanation'</p>	1	

Question		Answer/Indicative content	Mark	Guidance
12	(a)	Credit 1 mark for underlining '(so) it's about time science turned its attention to more important projects'	1	Candidates who include the example 'like global warming' can still be credited with the mark as long as the whole conclusion has been included.
	(b)	Credit 1 mark for any correctly identified assumption. Creditworthy examples: <ul style="list-style-type: none"> • (She is assuming) that global warming is not also a waste of scientific time and effort. • That global warming is not as farfetched as aliens. • Searching for aliens is a waste of time. • Aliens are not real • Scientists are wasting time and effort 	1	
13	(a)	Credit 1 mark for ticking the second box.	1	Please follow the guidance on crossed out and duplicated answers.
	(b)	Credit 1 mark for each reasonable counterexample. Creditworthy examples: <ul style="list-style-type: none"> • If there were an epidemic that couldn't be cured it might cause mass panic • Information on a terrorist plot that could endanger the public • If it would cause any sort of public worry 	2	

Question	Answer/Indicative content	Mark	Guidance
(c)	<p>Credit up to 2 marks for each clear and relevant and developed reason that would support the view that it is wrong to keep information from the public.</p> <p>2 mark examples:</p> <ul style="list-style-type: none"> • The public have a right to know about things that affect us, so should be given any information the government knows. • If people don't know about important things like alien visitations, then this might put them in harm's way when aliens come again. • Because people aren't stupid, and when they find out that they have been deceived they become suspicious of their government and its rules. <p>1 mark examples:</p> <ul style="list-style-type: none"> • It's against our rights • People don't like being lied to • People will stop trusting the government. 	2 + 2	<p>Answers here do not need to be confined to the subject of aliens. Candidates who answer more generally can access the full range of marks.</p>
14	<p>Marks are to be allocated in accordance with the performance descriptors below. The content for the arguments may be utilised and/or developed from the documents or may be independent of those documents.</p> <p>Performance descriptions for 7 to 10 marks: Level 3</p> <ul style="list-style-type: none"> • The conclusion is precisely stated • Reasons are provided for the conclusion, which are persuasive, cogent and fully developed • The structure of the reasoning is clear and explicit and places minimal reliance on assumptions • Evidence and examples are provided which are both relevant and clearly strengthen the reasoning • Grammar, spelling and punctuation are good. 	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>Level 3 exemplar I believe that there was no alien crash at Roswell in 1947. There are too many inconsistencies in the claims of sightings</p>

Question	Answer/Indicative content	Mark	Guidance
	<p>Performance description for 4 to 6 marks: Level 2</p> <ul style="list-style-type: none"> • The conclusion is clearly stated • Reasons are provided for the conclusion, which are plausible and relevant • The structure of the reasoning is not fully explicit and does rely on some assumptions • Evidence and examples are provided which are relevant but are open to challenge • Grammar, spelling and punctuation are adequate. <p>Performance description for 1 to 3 marks: Level 1</p> <ul style="list-style-type: none"> • The conclusion is imprecise and unclear • Reasons are undeveloped and only provided weak support for their conclusion • Structure is either absent or minimal or unclear • Evidence and examples are poorly developed or explained and are open to obvious counter examples and objections • Grammar, spelling and punctuation may be inadequate. <p>0 marks – no creditworthy material</p>		<p>and the alternative explanations provided by the authorities are far more plausible.</p> <p>Firstly, there are differing descriptions of the UFO, with some saying it was disc-shaped and others describing it as a ‘six pointed star’. This weakens the credibility of these accounts, because something so extraordinary would surely be more memorable and you would expect better corroboration of accounts. Some might argue that there was some corroboration, for example between Grady Barnett and Dan Wilmot’s account. They both described it as disc-shaped, but one of these accounts was given three years later, which makes it less reliable as it could easily have been influenced by media descriptions of the previous account. Secondly, the government issued explanations of the sightings including top-secret espionage technology (Project Mogul) which is plausible given the timing of the event towards the end of the 2nd world war, and would also explain why they wanted to cover up what had been seen at the time. Therefore, the military story is more believable than the idea that aliens landed in Roswell that night. [10 marks]</p> <p>Level 2 exemplar</p> <p>I strongly believe that aliens did crash at Roswell. Firstly, a good number of people who worked at the crash site with good reliability have claimed to have seen evidence. For example, Major Jesse Marcel, an intelligence officer with a good reputation, claimed to have seen the UFO, saying it was made of material ‘so durable it could not be dented with a sledgehammer’.</p> <p>Although the government provided explanations for the various sightings, it is obvious that they are just cover up stories. Finally, there have been other witnesses who claimed to have actually seen alien bodies. Therefore, I strongly believe that aliens crashed at Roswell in 1947 and the government tried to cover it up. [6 marks]</p>

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					<p>Level 1 exemplar The government tried to stop people finding out about the alien landing at Roswell. Flying saucers don't just appear in the sky for no reason! They even changed their story in the newspaper when they realised. [2 marks]</p>
15	(a)	(i) & (ii)	<p>Credit up to 2 marks for each relevant, developed reason that supports Esme's suggestion.</p> <ul style="list-style-type: none"> • Science has given us explanation for things that people used to put down to God such as the creation of the universe. • The universe works according to scientific laws so everything can be explained by those laws. <p>Credit 1 mark for a reason that is relevant but less clearly developed/challenging.</p> <ul style="list-style-type: none"> • Science has explained lots of things in the past. • We don't believe in superstitions anymore. 	2+2	For marks to be awarded for the second reason (ii) it needs to be sufficiently different from the first reason to represent a separate answer.
	(b)		<p>The argument needs to focus on the conclusion that it is reasonable to believe in something for which there is no scientific evidence</p> <p>Marks are to be allocated in accordance with the performance descriptors below.</p> <p>Performance description for 5 to 6 marks: Level 3</p> <ul style="list-style-type: none"> • The conclusion is precisely stated • A clear intermediate conclusion is included • The structure of the reasoning is clear and explicit and places minimal reliance on assumptions • Grammar, spelling and punctuation are good. <p>Performance description for 3 to 4 marks: Level 2</p> <ul style="list-style-type: none"> • The conclusion is clearly stated, though not necessarily precisely focused. 	6	<p>The main discriminator here in terms of levels is likely to be the quality of the reasoning. However, in order to reach L3 an intermediate conclusion must be included.</p> <p>Level 3 exemplar I strongly believe that we should have the right to believe in things without having the evidence to back it up. Firstly, believing something is true is the basis for scientific investigation in the first place. Believing that aliens landed at Roswell set off a chain of investigations and experiments so that proof could be found either way. So, science depends on people's non-evidenced beliefs. Secondly, it is a basic human right to believe whatever we like. [5 marks]</p>

Question	Answer/Indicative content	Mark	Guidance
	<ul style="list-style-type: none"> • At least one reason is provided for the conclusion, which is plausible and relevant • There may be an attempt at an intermediate conclusion • The structure of the reasoning is not fully explicit and does rely on some assumptions • Grammar, spelling and punctuation are adequate. <p>Performance description for 1 to 2 marks: Level 1</p> <ul style="list-style-type: none"> • The conclusion is imprecise and unclear • The reasoning provides very weak support for the conclusion • Structure is either absent or minimal or unclear • Grammar, spelling and punctuation may be inadequate. 		<p>Level 2 exemplar Some things just can't be explained fully by science. We don't have definite proof that the big bang happened and lots of people believe in that. [3 marks]</p> <p>Level 1 exemplar One day we might have proof of aliens. The universe is expanding every day and there are more and more planets all the time so one must have life on it. [1 mark]</p>

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