OCR
Oxford Cambridge and RSA

Level 2 Award

Thinking and Reasoning Skills

Unit 1 **B901**: Thinking and Reasoning Skills

OCR Level 2 Award

Mark Scheme for June 2016

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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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Annotations

used in the detailed Mark Scheme (to include abbreviations and subject-specific conventions)

Annotation	Meaning
?	Unclear
BOD	Benefit of doubt
λ	Caret sign to show omission
✗	Cross
DEV	Development
IRRL	Significant amount of material which doesn't answer the question
L1	Level 1
L2	Level 2
L3	Level 3
L4	Level 4
NAQ	Not answered question
NBOD	Benefit of doubt not given
SEEN	Page seen
✓	Tick

Question			Expected Answer	Mark	Rationale/Additional Guidance
1	a		Credit 1 mark for the correct identification of the conclusion: Credit 1 mark for underlining the sentence: <u>Petrol stations should not advertise their prices in decimal points.</u> **Accept:** Petrol stations should not advertise their prices in decimal points, such as 146.9p per litre.	[1]	**Principle of discrimination** This question discriminates between candidates who can demonstrate accuracy in the selection of the correct argument element from those who have not understood the gist of the argument. **1 marks - PRECISION** For precisely selecting the correct argument element. **0 marks** • For an identification of an incorrect part of the text. • For no creditworthy material. **NB** The mark is **not** to be awarded to any candidate who underlines the conclusion but also underlines other words or phrases from the following sentences.
1	b		Credit 1 mark for the correct identification of ONE reason: • The halfpenny coin was withdrawn from circulation (in 1984) • (When you pay for your petrol,) the total cost is always rounded down to the nearest penny anyway. Example for 0 marks The halfpenny coin was withdrawn from circulation in 1984. When you pay for your petrol, the total cost is always rounded down to the nearest penny anyway. *(two reasons)*	[1]	**Principle of discrimination** This question discriminates between candidates who can demonstrate accuracy in the selection of the correct argument element from those who have not understood the gist of the argument. **1 marks - PRECISION** For precisely selecting one correct reason. The mark can be awarded with or without the inclusion of the words bracketed in the mark scheme. **0 marks** • For an identification of an incorrect part of the text. • For an identification of a correct part of the text, along with another argument element. • For no creditworthy material.

Question			Expected Answer	Mark	Rationale/Additional Guidance
					NB The mark is **not** to be awarded to any candidate who puts brackets around more than one simple reason.
1	c	i	Credit 1 mark for correctly circling <u>Map A.</u> Map A is the correct map because it correctly shows each reason independently supports the conclusion and neither depends on each other.	[1]	**Principle of discrimination** This question discriminates between candidates who can demonstrate accuracy in using visual argument maps to represent the difference between joint and separate reasoning from those who have not understood the relationships between reasons in an argument. **1 marks - PRECISION** For precisely selecting the correct visual argument map. **0 marks** • For an identification of an incorrect argument map. • For identification of more than one argument map. • For no creditworthy material. **NB** Candidates who point to the right map or circle the title Map A rather than the whole map should still gain the mark.
1	c	ii	Credit 1 mark for any answer which explains that the reasons are <u>separate / not joint / independent / do not rely on each other</u>. These terms do not have to be used provided the idea they express is adequately stated. The mark is **not** to be awarded for claiming the reasons are stronger together because this is true of both joint and independent / separate reasons.	[1]	**Principle of discrimination** This question discriminates between candidates who can demonstrate accuracy in recognising how visual argument maps represent the difference between joint and separate reasoning from those who have not understood the relationships between reasons in an argument. **1 marks - PRECISION** For an explanation which shows the relationships presented by the correct visual argument map. **0 marks** • For an incorrect explanation of the correct argument map.

Question			Expected Answer	Mark	Rationale/Additional Guidance
			Examples for 1 mark • Map A is the correct because it shows that the reasons are separate. • Because the reasons are independent and not joint. **Examples for 0 marks** • The reasons are stronger together. • Because the reasons are joint and not independent / separate.		• For a correct explanation of the incorrect argument map • For lack of precision / ambiguity in explaining the correct argument map. • For no creditworthy material. **NB** The mark <u>is</u> available to candidates who incorrectly circle Map B or Map C in answer to the first part of the question, just as long as their explanation is (c) (ii) is correct.
1	d	i	**Examples for 1 mark** • You don't have to carry around as many coins. • it makes it easier to pay • the tills do not have to have so many small coins • the price of the item is clearer • it is easier to add up what you spend **Example for 0 marks** it is easy *(this is a reason, but it is unclear how this offers support or challenge)*	[1]	**Principle of discrimination** These questions discriminate between candidates who select and utilise argument elements effectively and clearly, accurately and coherently using appropriate language, with those who convey a basic point. **1 mark** **(i):** For a reason that gives support to the claim **(ii)**: For a reason that challenges the claim **0 marks** • For something unrelated so it does not give support/challenge, • For a statement that is too lacking in plausibility to offer recognisable support/challenge. • For no credit-worthy material.
1	d	ii	**Examples for 1 mark** • people like to feel they have been given change • people enjoy getting change • every penny counts. • it is easier to keep things as they are • it makes items more expensive	[1]	

Question			Expected Answer	Mark	Rationale/Additional Guidance
1	e		Credit 1 mark for a reasonable and possible consequence of the introduction of a 25p coin **Examples for 1 mark** • it would reduce the amount of change in a person's pocket/wallet/purse • people would find it hard to adjust to it, just like the £2 coin • pricing **may** be changed to multiples of 25p • some people would get confused by the new coin **Examples for 0 marks** • it would never happen (counter, not a consequence) • nothing would be sold at 99p (too extreme a consequence) • everything would be sold in multiples of 25p (too extreme) • everyone would be confused by the new coin (too extreme) Further examples to be considered at SSU	[1]	**Principle of discrimination** This question discriminates between candidates who can explore possible consequences through suppositional and counterfactual thinking, with those who cannot use suppositional or counterfactual reasoning. **1 mark - CLEAR** Identification of consequence which is possible AND reasonable to the introduction of a 25p coin. **0 marks** • For a consequence which is not reasonable (e.*g. the world would end, we would all become Americans*) • For a consequence which is not possible *(we would change to the Euro)* • For no creditworthy material
2			Credit 1 mark for indicating statement A as YES Credit 1 mark for indicating statement B as NO Credit 1 mark for indicating statement C as NO Credit 1 mark for indicating statement D as NO	[4]	**NB** Candidates may choose to write YES/NO, Y/N, ✓/X

Question			Expected Answer	Mark	Rationale/Additional Guidance
3	a		Credit 1 mark for ticking <u>list of information.</u>	[1]	**Principle of discrimination** This question discriminates between candidates who recognise and identify difference between arguments, rants, lists of information and explanations, from those who are yet to understand the nature and purpose of different types of reasoning. **1 marks - PRECISION** For precisely identifying that the reasoning used is information. **0 marks** • For selecting the incorrect response. • For selecting more than one response (scattergun approach) • For no creditworthy material. **NB** An argument is an attempt to persuade someone to accept a particular point of view. There will be at least one conclusion and at least one reason. This passage is not an argument as there is no conclusion or attempt to persuade. An explanation presents something as factual, and will also tell you why or how that fact came (or will come) about. This passage is not an explanation as it is not giving an account of why or how something occurs, such as a cause, antecedent event, or necessary condition. A list of information is a series of related statements that intend to give information, such as a report or a description of the way something works. This is a list of information as it is just reporting data men's first names. A rant is a series of opinionated statements that do not work together in a persuasive or structured way. This passage is not a rant, as there is no element of persuasion, merely reporting data men's first names.

Question			Expected Answer	Mark	Rationale/Additional Guidance
3	b	i	Credit 1 mark for circling A	[1]	**Principle of discrimination** This question discriminates between candidates who can demonstrate accuracy in using visual representations of the data, identifying relevance and selectivity, from those who are yet to understand how evidence can be used selectively. **1 marks - PRECISION** For precisely selecting the correct pie chart. **0 marks** • For an identification of an incorrect pie chart. • For identification of more than pie chart. • For no creditworthy material. **NB** Candidates who point to the pie chart or circle the title Pie Chart A rather than circling the answer should still gain the mark.
3	b	ii	Credit 1 mark for any answer which explains that the total percentage (70%) does not have to mean that each name has the same proportion within that total. **Examples for 1 mark** • A is correct as the 5 names form 70% of all of the names • Pie chart A shows the 5 names collectively form 70%. • B is incorrect as the pie chart should represent 100% not 70% and chart C is wrong because 70% is a total, not necessarily equally divided by all 5 names.	[1]	**Principle of discrimination** This question discriminates between candidates who can demonstrate accuracy in recognising how the visual representations show the information from the argument from those who have not understood the relationships between information in an argument. **1 marks - PRECISION** • For an explanation of why the correct pie chart is correct • OR for an explanation of why **BOTH** incorrect pie charts are NOT correct. **0 marks** • For an incorrect explanation of the correct pie chart. • For a correct explanation of an incorrect pie chart • For an explanation of why ONE incorrect pie chart is not correct

Question			Expected Answer	Mark	Rationale/Additional Guidance
					• For lack of precision / ambiguity in explaining the correct pie chart. • For no creditworthy material. **NB** The mark <u>is</u> available to candidates who incorrectly circle Pie chart B or C in answer to the first part of the question, just as long as their explanation in (b) (ii) is correct. • Pie chart B is wrong as it ignores the 30% of men without those names. *(arguing against only one of the other charts)* • C is wrong because 70% is a total, not necessarily equally divided by all 5 names. *(arguing against only one of the other charts)* • Pie chart C is wrong as the 70% does not mean each name has the same proportion within that total. There could be more Johns than Richards. *(arguing against only one of the other charts)* • Pie chart B shows only the names which were the most common and ignores the irrelevant detail on people with other names.
3	c		**Example for 2 marks:** • That is what happened in the past, it doesn't mean to say it will happen in the future. • The research is retrospective and so does not predict that this will happen in the future • Being called John or Richard is neither a necessary nor a sufficient condition for admission to Oxford or the sole cause of being a successful businessman. • Going to Oxford does not necessarily produce the best in life. **Example for 1 mark:** • because the research is an average and not particular to individuals.	[2]	**Principle of discrimination** This question discriminates between candidates who can identify whether or not evidence / reasoning is sufficient to draw a particular conclusion, from those who have not yet understood that conclusions require strong support from its evidence and reasoning. **2 marks – DEVELOPED** For identifying and explaining a reason why the conclusion cannot be reliably drawn in a developed way, for example, making use of indicator words such as so, because… **1 mark – UNDEVELOPED** Identification of a reason why the conclusion cannot be reliably drawn.

Question			Expected Answer	Mark	Rationale/Additional Guidance
			Examples for 0 marks: • The conclusion cannot be reliably drawn • The conclusion can be reliably drawn.		**0 marks** • For stating that the conclusion cannot be reliably drawn, with no explanation • For a reason why the conclusion can be reliably drawn • For a response which lacks clarity • For no creditworthy material.
3	d		Credit 1 mark for ticking the first box – 'Getting good A-Level results'.	[1]	**Principle of discrimination** These questions discriminate between candidates who can correctly clarify the meaning of a concept used within a claim and those candidates who cannot.
3	e		Credit 1 mark for circling <u>bias</u>	[1]	**Principle of Discrimination** This question discriminates between candidates who can select different credibility criteria effectively to apply to reasoning, from those who show little discrimination in the selection of credibility criteria. **1 mark – CLEAR UNDERSTANDING** Identification of the correct criterion (vested interest) used to make the judgement. **0 marks** • For identification of an incorrect response. • For identification of more than one response (scattergun approach) • For no creditworthy material
4	a	i	Credit 1 mark for 45,000	[1]	**Principle of discrimination** These questions discriminate between candidates who can use verbal information, as well as a matrix, to elucidate connections, from those who have an insecure understanding of detail and inference. **1 marks - PRECISION** For precisely stating the correct name.
4	a	ii	Credit 1 mark for 76,000	[1]	
4	a	iii	Credit 1 mark for 42,000	[1]	
4	a	iv	Credit 1 mark for 47,000	[1]	

Question			Expected Answer	Mark	Rationale/Additional Guidance
					0 marks • For an identification of an incorrect name. • For identification of more than one name. • For no creditworthy material. **NB** • If the sentences are **not** completed, but the matrix unambiguously shows a correct solution, then the correct answers in the matrix can be credited. • If the sentences are completed incorrectly then **no** credit can be given for a correct solution being shown in the matrix. **NB** The correct average attendance for each club is Concordia = 60,000 Nisi = 42,000 Deus = 45,000 Superbia= 47,000 Fortitudo = 76,000
4	b		Credit 1 mark for identifying the flaw in the argument and credit a further mark for an explanation of the flaw in the argument **Example for 2 marks** • There is an ad hominem flaw, because it is attacking the football club manager as being greedy, rather than their real argument for changing the kits so often. **Example for 1 mark** • ad hominem. • It disrespects the arguer, not their argument.	[2]	

Question			Expected Answer	Mark	Rationale/Additional Guidance
4	c		Credit 1 mark for ticking the third box OR the fourth box. **Examples for 1 mark:** • Doing something which is wrong or inappropriate in the circumstances. • Not being kind or considerate to people.	[1]	**Principle of discrimination** This question discriminates between those candidates who can correctly clarify the meaning of a concept used within a claim and those candidates who cannot.
4	d		Credit 1 mark for any relevant question which could be asked about the 'fairness' of changing kits. **Examples of questions** • Do you purchase each of the kits the club produces? • Does it matter to you how often the kit changes? • Do you purchase the kit every time it is renewed? • Are your views consulted when the kit is renewed? • Do you feel pressurised to buy a kit every time it is renewed? • Are you spending lots of money buying kits?	[3]	Questions must have potential to link to the claim – it is unfair to supporters to change the kits so often. Do not credit very general questions- e.g. do you support a premier league team?
4	e		1 mark for each relevant criterion identified up to a maximum of two marks for two separate criteria Possible criteria include: • club image • marketing • change of sponsor	[1+1]	The criterion should be about how often kits are changed, not just one change of kit. The criterion should be about the decision of the club to release kits, not the decision of a supporter to buy them. **NB** The question specified "other than public opinion…"

Question			Expected Answer	Mark	Rationale/Additional Guidance
			• affordability • practicality		

Section B

Question			Expected Answer	Mark	Rationale/Additional Guidance
5			**Example for 1 mark** • It is only guide dogs and hearing dogs that people depend on to live their lives fully • There are no other animals that people depend upon **Example for 0 marks** • All pets are depended on. *(counter, not phrased as an assumption).* Credit 1 mark for a realistic assumption which is clearly stated.	[1]	**Principle of discrimination** This question discriminates between candidates who recognise the unstated assumption causing the argument not to function without it, from candidates who can show a slight recognition of missing reasons in the argument area, but who may lack clear understanding of whether the assumption is necessary. **1 mark - CLEAR** Identification of an assumption which is necessary for the argument and which would support the author's argument. **0 marks** • For just reference to the text • For a counter which is not presented as an assumption • For a reason which is not necessary for the argument. • For no creditworthy material
6	a		Credit 1 mark for ticking option ii.	[1]	

Question			Expected Answer	Mark	Rationale/Additional Guidance
6	b		Credit 1 mark for identifying a DIFFERENCE between the two sides of the argument Credit a second mark for explanation, expansion or exemplification which clarifies the differences. **Examples for two marks** • A pet is a living thing which feels pain and deserves treatment; a car is not alive. • People may need to fix a car to get it to work, whereas pets aren't really needed. **Example for one mark** • A pet is alive, a car isn't. • People might need to fix their car because they need it	[2]	**Principle of discrimination** This question discriminates between candidates who can identify the parts of an analogy and their areas of similarity and difference, from those who have yet to understand the use of an analogy within an argument. For 2 marks to be awarded, both sides of the analogy must be explicitly referred to.
6	c		Credit 1 mark for identifying a common feature to BOTH sides of the argument Credit a second mark for explanation, expansion or exemplification which clarifies the similarity. **Examples for 2 marks** • Both cars and pets can suddenly develop something wrong with them that needs to be put right. • You can be fined for not getting a fault fixed with your car and for not properly looking after your pet.	[2]	

Question	Expected Answer	Mark	Rationale/Additional Guidance
	• They can both be very expensive to put right or cure **Examples for 1 mark** • They can both go wrong. • You can be attached to cars and pets.		
7	Credit 1 mark for each correct identification of the credibility criterion as below to a maximum of 3 marks 	Document	Credibility Criterion
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Document C: Guide dog owner	X (Y) Z
Document E: Pet Insurance company	(X) Y Z
Document F: Veterinary Surgery Owner	X Y (Z) | Credit 1 mark for each correct explanation to a maximum of 3 marks **Explanations** • The guide dog owner has a vested interest to get the government to do this because they won't have to pay for their guide dog's care • The pet insurance company has a vested interest to encourage people to buy insurance because they are selling the insurance	[6]	**Principle of Discrimination** This question discriminates between candidates who can select and apply different credibility criteria effectively to named individuals, from those who show little discrimination in the selection and utilisation of credibility criteria.

Question			Expected Answer	Mark	Rationale/Additional Guidance
			• The veterinary surgery owner has a vested interest to show how the Government could pay for pet care because they will be able to do more business		
8			Credit 1 mark for identifying the flaw and credit a further mark for an explanation **Example for 2 marks** • There is a false dilemma / restricting the options flaw, because the author gives only one solution to the issue of putting sick animals to sleep when there are other solutions. **Examples for 1 mark** • There are other options. • False dilemma / restricting the options.	[2]	**Principle of discrimination** This question discriminates between candidates who can name and explain flaws in arguments from those who have an insecure understanding of what is wrong with an argument. **2 marks – DEVELOPED APPLICATION** For identifying and explaining a flaw in an argument in a clear and developed way, for example, making use of indicator words such as so, because… **1 mark – UNDEVELOPED APPLICATION** For explaining a weakness/flaw in a brief and/or undeveloped way. **0 marks** • For providing an incorrect response. • For no creditworthy material.
9			**Acceptable conclusions** **Examples of reasons which could be raised:** **Support** **Challenge**	[10]	**Principle of Discrimination** This question discriminates between candidates who can carefully select argument elements and construct these into a plausible and coherent argument, from those who show little discrimination in the selection and utilisation of argument elements. **Performance descriptions for 7 to 10 marks: Level 3** • The conclusion is precisely and clearly stated • Reasons are persuasive, cogent and fully developed • Counter arguments are valid

Question	Expected Answer	Mark	Rationale/Additional Guidance
	NB: • A "best fit" approach should be adopted when assigning an answer to a level. The quality of the reasoning is the most important factor in determining the level for a response. At least two developed reasons, relevant to the conclusion, are expected for a top level answer. • Candidates are allowed to answer in either direction – supporting or challenging the conclusion.		• The structure of the reasoning is clear and explicit and places minimal reliance on assumptions • Evidence derived from the documents is used critically and strengthens the argument • Grammar, spelling and punctuation are good • Any ideas borrowed from the documents are developed and expanded **Performance descriptions for 4 to 6 marks: Level 2** • The conclusion is clearly stated • Reasons which are plausible and relevant are offered • The structure of the reasoning is not fully explicit and does rely on some assumptions • Evidence derived from the documents is used to strengthen the argument • Grammar, spelling and punctuation are adequate • Any ideas borrowed from the documents are re-expressed in the student's own words and used appropriately but not necessarily further developed **Performance descriptions for 1 to 3 marks: Level 1** • The conclusion is imprecise and unclear • Reasons offered are undeveloped and only provide weak support for their conclusion • Structure is either absent or minimal or unclear • Ideas are copied from documents without further development • Evidence derived from the document is not always relevant or significant • Grammar, spelling and punctuation may be inadequate **Performance descriptions for 0 marks** • No conclusion • Claims are irrelevant and imprecise

Question			Expected Answer	Mark	Rationale/Additional Guidance
10			**Conclusion:** **Examples of reasons which could be raised:** **NB** • A "best fit" approach should be adopted when assigning an answer to a level. The quality of the reasoning is the most important factor in determining the level for a response. At least two developed reasons, relevant to the conclusion, are expected for a top level answer. • If candidates argue in the wrong direction, they can access a maximum of 3 marks (bottom of Level 2).	[6]	**Performance description for 5 to 6 marks:** • Precise conclusion clearly identified • At least two reasons are provided for the conclusion, which are persuasive, cogent and fully developed • Evidence and/or examples are provided which are both precisely relevant and adequate • The structure of the reasoning is clear and explicit and does not rely on assumptions. **Performance description for 3 to 4 marks:** • A conclusion is identified but may be imprecise or over blown • At least two reasons are provided for the conclusion but at most one is fully developed and not open to challenge • Evidence and/or examples if provided may be relevant but not adequate • The structure of the reasoning is not fully explicit and does rely on some assumptions. **Performance description for 1 to 2 marks:** • The conclusion may not be explicitly identified • Reasons are undeveloped and only provide weak support for their conclusion • Evidence and/or examples are not provided • Structure is either absent or minimal or unclear. **Performance descriptions for 0 marks** • No conclusion • Claims are irrelevant and imprecise

OCR (Oxford Cambridge and RSA Examinations)
1 Hills Road
Cambridge
CB1 2EU

OCR Customer Contact Centre

Education and Learning
Telephone: 01223 553998
Facsimile: 01223 552627
Email: general.qualifications@ocr.org.uk

www.ocr.org.uk

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