CAMBRIDGE
International Education

Cambridge International AS & A Level

THINKING SKILLS **9694/43**

Paper 4 Applied Reasoning **May/June 2025**

MARK SCHEME

Maximum Mark: 50

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the May/June 2025 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

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Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptions for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5: Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).
GENERIC MARKING PRINCIPLE 6: Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Annotations guidance for centres

Examiners use a system of annotations as a shorthand for communicating their marking decisions to one another. Examiners are trained during the standardisation process on how and when to use annotations. The purpose of annotations is to inform the standardisation and monitoring processes and guide the supervising examiners when they are checking the work of examiners within their team. The meaning of annotations and how they are used is specific to each component and is understood by all examiners who mark the component.

We publish annotations in our mark schemes to help centres understand the annotations they may see on copies of scripts. Note that there may not be a direct correlation between the number of annotations on a script and the mark awarded. Similarly, the use of an annotation may not be an indication of the quality of the response.

The annotations listed below were available to examiners marking this component in this series.

Annotations

Annotation	Meaning
	Correct response. Use when a mark has been achieved in **Q1**, **2** and **3**.
	Incorrect (part of a) response
NGE	Not good enough. Use wherever such a judgment has been made.
BOD	Benefit of doubt
S	Strand of reasoning
CON	Main Conclusion
I	Intermediate Conclusion
AE	Additional argument element in **Q1** / Argument Element in **Q4**
U	Creditworthy material in the Use of Documents skill
3	Use stamps 1–5 alongside U to indicate which document has been referenced

Annotation	Meaning
EVAL	Evaluation of documents
C	Comparison of or inference from documents
Q	Creditworthy material in the Quality of Argument skill
T	Treatment of counter-position
L2	Level achieved. Add annotation at the end of **Question 4** in the order of S, U, Q from left to right.
	Strong demonstration of a skill Higher mark within a level awarded
	Minor demonstration of a skill Flaw or weakness Lower mark within a level awarded
SEEN	Examiner has seen that the page contains no creditworthy material Use to annotate blank pages
Highlighter	Use to draw attention to part of an answer

There must be at least one annotation on each page of the answer booklet.

Question	Answer	Marks
1(a)	***State the main conclusion of the argument.*** history should not be taught in schools.	**1**
1(b)	***Identify two intermediate conclusions in paragraphs 5 to 6.*** *1 mark for each correctly identified IC [max 2]* • (So,) the inclusion of history in a school curriculum can be intellectually dangerous • people who study history at school may learn to treat questionable information as truth. • (So,) studying history at school ruins your employment prospects.	**2**

Question	Answer	Marks
1(c)	***Analyse the structure of the reasoning in paragraph 3.*** *Award 1 mark for each of the following [max 3]:* R1 Young people are very interested in historical battles R2 (and) they [young people] are also very impressionable. IC (As a consequence,) children can become obsessed with historical conflicts R3 Destructive thoughts can last for years. C So history teaching leads to destructive behaviours Ex (like) discrimination, hatred, and violence. A1 Impressionable people are prone to obsession. A2 Obsession with historical conflicts leads to destructive thoughts. A3 Destructive thoughts lead to destructive behaviours. *Award 1 mark for identifying two relationships between elements,* *or 2 marks for identifying three relationships between elements, e.g.* • R1/R2 support(s) IC • IC/R3 support(s) C • IC and R3 support C jointly • Ex illustrates C • A1 is needed for R2 to support IC • A2 is needed for IC and R3 to offer joint support to C • A3 is needed in order for R3 to support C *Reference to start and end of elements must be unambiguous* *Sample 5-mark answer* The first sentence presents two reasons each of which supports 'children can become obsessed with historical conflicts.', which is an intermediate conclusion **[1]**. This IC, together with a third reason, **'**Destructive thoughts can last for years' **[1]**, supports the conclusion of the paragraph **[1r] [1r]** (So history teaching leads to destructive behaviours **[1]**) if it is assumed that destructive thoughts lead to destructive behaviours **[1]**.	**5**

Question	Answer	Marks
1(d)	***Identify an unstated assumption in paragraph 7 upon which the reasoning relies.*** *1 mark for any of the following* • Increasing the time spent teaching maths and science will result in more mathematicians/scientists (or reverse argument for decreasing time spent teaching maths and science) • Increasing the time spent teaching maths and science will increase the sort of mathematicians/scientists that can solve climate change (or reverse argument for decreasing time spent teaching maths and science) • Knowledge of history cannot contribute to solving climate change • There is no upper limit to the number of scientists and mathematicians that would benefit the world • Pupils would choose to study maths or science instead of history if history was not available	**1**

Question	Answer	Marks
2(a)	***Identify and explain three flaws and/or weaknesses in the reasoning in paragraphs 4 to 6.*** *2 marks for a developed version of any of the following points* *1 mark for a weak or incomplete version of any of the following points [max 6]* *Paragraph 4:* • *Slippery slope* – from lessons that engender national pride to wars • *Conflation* – of national pride with nationalism *Paragraph 5:* • *Straw man* – describing history as 'a few dates and who won what battle' is a deliberate attempt to make it seem less important • *Reliance on questionable assumption* – that historical facts should be treated differently from facts in science and mathematics • *Conflation* – of oversimplified information with questionable information *Paragraph 6:* • *Rash generalisation* – from a single example of a former student to a general statement • *Reliance on questionable assumption* – that the student in the example did not go on to have a successful career • *Causal flaw* – there might have been reasons for Alison's low-paid job that were unrelated to the subject she studied at university • *Relevance* – the example is of a student who had studied history at university, so it is not particularly relevant to a conclusion about studying history at school • *Inconsistency* – the example of studying history at university appears to run counter to the acknowledgement in paragraph 1 that it might be acceptable to study history at university • *Inconsistency* – the author says she is employed and also implies that she has no employment prospects	**6**

Question	Answer	Marks
2(b)	***Explain how the reasoning in paragraph 2 is weakened by the flaw of invalid deduction.*** The reasoning takes the form 'If A then B. Not A, therefore not B.', (where A is 'the lessons students receive are presented in a fair and balanced way' and B is 'they will leave school with a fair and balanced view of the world') **[1]**. This is *denying the antecedent* **[1]**. It does not follow that if the first condition is not fulfilled the second condition is not fulfilled / it treats A as a necessary rather than a sufficient condition for B **[1]** because there are things other than A which can cause B / students could, for example, learn to ignore or criticise distorted information given in a history lesson **[1]**. *(Credit any valid example of how people can leave school with a fair and balanced view despite having not been taught in a fair and balanced way*.)	**2**

Question	Answer	Marks
3(a)	***'Americans find studying history is more valuable than studying science.' (Document 4A)*** ***Explain why this conclusion cannot be drawn from the data collected by the survey described in Document 4A.*** Only counting the most valuable subject ignores the value that respondents ascribe to the other subjects they did not select **[1]**. It is possible that those who picked sciences thought they were much more valuable than other subjects but those who picked history did so by only a narrow margin, or that those who picked mathematics may have rated science a close second but put history near the bottom **[1]**.	**2**
3(b)	***'Studying history gives you more earning power than studying biology.' (Document 4B)*** ***Identify four weaknesses in the support given by the graph in Document 4B to this claim.*** *1 mark each for any of the following points [max 4]* • The difference between history and biology is too small to be significant • The figures are for 5 years after graduation so it is possible that subsequent career progression would produce different values • The claim appears to be general, but the evidence is from one country • It is possible that employment conditions in the UK are less favourable to science graduates / more favourable to history graduates • The study does not appear to control for other factors – for example, history graduates could be, on average, more intelligent, hardworking or career-driven than biology graduates • From the list of subjects given it is likely that the more highly achieving 'biology-orientated' students would opt for medicine, dentistry and veterinary science	**4**

Question	Answer	Marks
4	***'History should not be taught at school.'*** ***Example high-scoring answers*** *Argument to support (802 words)* When schools first became widespread, science was in its infancy and subjects like computing were not imagined. You can only teach other people something if you already know about it, and history, along with Ancient Greek and Latin, was one of the few subjects people knew about. Dead languages no longer feature on school curriculums and nor should history. The fact that 'history teacher' is 3rd on the list of history-related jobs suggests that there is not much else for historians to do other than contribute to the circularity of history teaching. Tradition, as Doc 1 hints, is not a sufficient reason for the inclusion of history in a school curriculum. A lot of school history is false. The same cannot be said for other subjects. It is easy to objectively check if maths or science information is wrong but history depends so much on interpreting what others have written, there is rarely an objective truth to be found. Quotations, although illustrative, often lack credibility. However, at least 4 quotes from Doc 5 – Napoleon, Churchill, Hill and Mantel – suggest that much of history is wrong, and Hill seems to be a historian so he ought to have some expertise in the matter. If much of history is false, then history lessons must deliver a large amount of incorrect information. It is not acceptable to knowingly impart incorrect information to children. Although there is a belief, there is not much evidence that history does help us make informed political decisions. Quotes in defence of history that come from historians, such as those in Doc 2 and Bullock and Santayana in Doc 5, should be treated with caution. Expertise aside, they are likely to have a pro-history bias and perhaps a professional vested interest. The quote from Marwick is also a bit of a straw man. Nobody is suggesting that we know 'no history', it could perfectly well be studied at university or in adulthood. We often hear the quote from Santayana, or one like it, but it is directly countered by the quote from Hegel. Examples of where humans have not learned from history, despite all the historical evidence being in front of them, are not hard to find.	**27**

Question	Answer	Marks
4	Learning about history can and does lead to a lot of unpleasantness, as illustrated by the Hill and Hobsbawn quotes in Doc 5 (nuanced quotes from historians having a little more credibility than pro-history quotes from the same people). As Doc 1 suggests, lessons are simplified. In a simplified curriculum, a battle is a memorable thing in the mind of a child. If the history surrounding a particular battle or war, such as the Battle of the Boyne or the Alamo, is taught differently in schools attended by children from different communities, then, as Doc 1 suggests, outside school this can, and does, lead to prejudice and violence. Doc 1 has many weaknesses and its attempts to encourage the assumption that bias exists only in history lessons is highly questionable. Bias, either conscious or unconscious, exists in all teachers and all lessons. However, bias in other lessons does not have the negative consequences it has in history. Facts can be more easily checked and, even if unchecked, some skewed mathematical information is not likely to dwell in a child's mind for years. Wars are rarely started because of a difference of opinion about whether statistical significance can be inferred from non-overlapping standard deviations. Arguments for the usefulness of history are weak. Doc 2 and the anonymous quote in Doc 5 tell us that students learn valuable skills in history lessons and the same can be inferred from the list of jobs in Doc 3. However, skills such as data processing, evaluation of evidence and communication of ideas can be developed in a range of other subjects. The context of history is not essential for any of them. The salary figures in Doc 4 are not particularly relevant as there is no information about what these people studied at school. It is reasonable to assume that history graduates have studied history at school, but they will have studied a range of other subjects as well, many of whose skills could be contributing to their salary. The comparison with biology is perhaps a little disingenuous, as many biologically minded school leavers are likely to have opted for lucrative medicine-type courses. The figures in Doc 4A really only distinguish maths and English from all other subjects. The fact that history comes out highest of the others is not only within the margin of sampling error but could be explained by the subject's aforementioned memorability. The case for teaching history is not strong and the problems it creates are real. History should not be taught in schools. *Argument to challenge (728 words)* Most schools teach history, and with good reason. Doc 1's unsupported claim that the presence of history is rarely questioned is wrong. Latin and Ancient Greek were once commonplace in European schools. It was long ago decided that they were not particularly useful in modern society and so they were dropped. School curriculums are constantly revised, and history is always deemed worthy of retention by people with more expertise than me.	

Question	Answer	Marks
4	The claim in Doc 1 that ancient knowledge is of no use today is demonstrably wrong. Although quotations often lack credibility, they can at least be illustrative and Carr in Doc 2 and Bullock in Doc 5, who, as historians, have some expertise in the matter, both state the need for an understanding of history as an essential starting point when attempting to solve key modern political issues. If we don't understand the history of, for example, the Middle East, we are unlikely ever to be able to offer any sensible solutions to problems in that part of the world. Doc 2 also tells us that history supports democracy. In Doc 2, an unnamed historian, who as far as we can tell, also knows what he is talking about, cites the need for a knowledge of history in order to support democracy. Without an understanding of how things have come to be the way they are we can hardly be expected to cast an informed vote in a general election or a referendum. History lessons offer students an opportunity to develop a range of transferrable skills, such as those mentioned in Doc 2, that are useful throughout life. This list is corroborated by the anonymous quote in Doc 5. Some might argue that these skills could be developed in other lessons. However, attempting to teach these dry skills in isolation can be rather uninspiring for a child. A young person needs a context around which to exercise their thought muscles. A child is much more likely to develop evaluative skills if the context of the evidence they are dealing with is memorable, for example, whether the moon landings were faked. The figures in Doc 4A really only distinguish maths and English from all other subjects. The fact that history is the 'best of the rest' might not be that it is more useful (as Doc 4 implies) but that it is more memorable, but memorability counts for a lot in education. Someone who remembers the historical fact, that Columbus sailed across the Atlantic in 1492, might be more likely to remember a skill that they developed while debunking the claim that he 'discovered America'. The salary numbers presented in Doc 5 seem respectable, despite the document's cherry-picked choice of biology for comparison, and are consistent with the claims about transferrable skills discussed above. Although the data are from one country only, generalisation to others does not seem unreasonable. The list in Doc 3 suggests that history is not just useful, but perhaps essential for a range of jobs. If you are struggling to think of an example to illustrate Marwick's quote in Doc 2, look no further than the absurdity of the tour guide in Doc 3 knowing no history. Given that history is useful, arguments that history could be taught later in life, mentioned in Doc 1, are ridiculous. We don't suggest that doctors begin learning about the human body only after they get to university. History needs to be introduced to large numbers of children at a young age so that, as they get older and begin to choose their classes, some will be left studying history. The main anti-history document, Doc 1, has many flaws. Its claims of teacher bias and a blurring of the distinction between fact and opinion in Doc 1 are applicable to all subjects. Many students emerge from English lessons with a distorted or false impression of a book they have been studying, where a certain interpretation could have been emphasised by a consciously or unconsciously biased teacher. Moreover, even if its closing statement that we need more scientists is true, it does not follow that an increase in the number of scientists would be facilitated by a decrease in the number of historians.	

Question	Answer	Marks
4	There is no case that history should be removed from the curriculum and it has a number of positive benefits. So history should be taught in schools.	

Level	Structure*		Use of documents		Quality of argument	
	• Conclusion (MC) • Intermediate conclusions (ICs) • Strands of reasoning • Examples or evidence • Original analogy • Hypothetical reasoning		• Reference to documents • Evaluation of documents • Comparison of documents (corroboration or contradiction) • Inference from documents		• Comprehensive and persuasive argument • Logical order of reasoning • Relevant material • Treatment of counter-positions • Absence of flaws and weaknesses • Non-reliance on rhetorical devices	
3	Excellent use of structural elements: • Precise conclusion • Multiple valid explicit ICs that support the MC • Multiple clear strands of reasoning • Some effective use of other argument elements to support reasoning	7–9	Excellent use of documents: • Judicious reference to at least three documents • Multiple valid evaluative points, clearly expressed and used to support reasoning • Some comparison of or inference from documents	7–9	Excellent quality of argument: • Sustained persuasive reasoning • Highly effective order of reasoning • Very little irrelevant material • Key counter-position(s) considered with effective response • Very few flaws or weaknesses • No gratuitous rhetorical devices	7–9
2	Good use of structural elements: • Clear conclusion • More than one valid IC (may be implied) • Some strands of reasoning • Some use of other argument elements	4–6	Good use of documents: • Relevant reference to at least two documents • At least two evaluative points used to support reasoning • May be some comparison of or inference from documents	4–6	Good quality of argument: • Reasonably persuasive reasoning • Unconfused order of reasoning • Not much irrelevant material • Some counter-position(s) considered with some response • Not many flaws or weaknesses • May be some reliance on rhetorical devices	4–6
1	Some use of structural elements: *There may be:* • Conclusion • Implied ICs • Some strands of reasoning • Some use of other argument elements	1–3	Some use of documents: *There may be:* • Reference, perhaps implicit, to a document • Some evaluation of a document • Some comparison of or inference from documents	1–3	Some quality of argument: *There may be:* • Some support for the conclusion • Some order to the reasoning • Some relevant material • Some counter-position(s) considered with some response	1–3
0	No creditable response	0	No creditable response	0	No creditable response	0

*Cap mark for Structure at 3 if no conclusion given