

GCE

Critical Thinking

Unit 3 (CRIT3) Beliefs, Claims and Arguments

Mark scheme

2770

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Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this Mark Scheme are available from aqa.org.uk

Critical Thinking Unit 3 (CRIT3)

Marking methods

In fairness to students, all examiners **must** use the same marking methods. The following advice may seem obvious, but all examiners **must** follow it as closely as possible.

1. If you have any doubt about which mark to award, consult your Team Leader.
2. Refer constantly to the mark scheme throughout marking.
3. **Always** credit **accurate, relevant and appropriate** answers which are not given in the mark scheme.
4. Do **not** credit material irrelevant to the question / stated target, however impressive it might be.
5. If a one word answer is required yet a list is given, take the first answer (unless it is crossed out).
6. If you are considering whether or not to award a mark, ask yourself 'Is this student nearer those who have given a correct answer or those who have little idea?'
7. Read the information on the following page about levels of response mark schemes.
8. Use the full range of marks. Don't hesitate to give full marks when the answer merits them or give no marks where there is nothing creditable.
9. No half marks or bonus marks can be given under any circumstances.
10. The key to good and fair marking is **consistency**. Once approved, do **not** change your standard of marking.

Marking using CMI+

All GCE Critical Thinking papers are marked electronically using a software application called CMI+ (Computer Marking from Image). Instead of paper being posted to examiners, student responses are scanned and sent electronically. The software is easy to use, but demands a different approach.

1. Instead of marking paper-by-paper you will mark item-by-item. An item is a part-question. Each time you log on you will need to choose an item to mark.
2. Before you start marking your own items you will need to mark some pre-marked items known as seeds. These ensure you are still applying the same standard set during standardising. If you are not, you will need to speak to your Team Leader before you can continue marking in order to clarify the correct interpretation and application of the mark scheme.
3. Seeds will also appear at random intervals during your marking to ensure you are maintaining the correct standard. If your marking is out of tolerance for a seed you will be prevented from marking that item until your Team Leader discusses this with you and clears you. You will, however, be able to mark other items.
4. Some higher mark questions are Double Marked. This means that a certain number of answers that you mark will be marked by another person. If the marks are within tolerance of one another, the higher mark awarded is the mark the student will be awarded.
5. You can annotate items in various ways: underlining, highlighting and adding icons from a drop-down menu. Your Team Leader will tell you which types of annotation to use. Examiners must not add extra annotation as this can be confusing for teachers and students if they request Access to Scripts.

6. As you mark each response, enter the mark you are going to award in the box at the bottom of the screen. If you realise you have made a mistake you can go back one paper to change the mark.
7. Your assessments will be monitored throughout the marking period. This ensures you are marking to the same standard, regardless of how many clips you have marked or what time of day you are marking. This approach allows senior examiners to ensure your marking remains consistent. Your Team Leader can bring you back to the right standard should you start to drift.
8. If your marking of a particular item is out of line, your Team Leader will contact you as soon as possible to explain where differences are occurring and how this can be addressed.

Levels of Response marking

Level of response marking requires a different approach than traditional ‘point for point’ marking. It is essential the **whole response is read** and allocated the level it **best fits**.

Marking should be positive, rewarding achievement rather than penalising for failure or omissions. The award of marks must be directly related to the marking criteria.

Use your professional judgement to select the level that **best** describes a student’s work. Levels of response mark schemes enable examiners to fully reward valid, high ability responses which do not conform exactly to the requirements of a particular level.

If a student demonstrates knowledge, understanding and/or evaluation at a certain level, he/she must be credited at that level. **Length** of response or **literary ability** should **not be confused with critical thinking skills themselves**. A short answer which shows a high level of conceptual ability, for example, must be credited at that level.

Levels are tied to specific skills. Examiners should **refer to the stated assessment target** of a question (see the mark scheme) when there is any doubt as to the relevance of a student’s response.

Levels of response mark schemes include either **examples** of possible students’ responses or **material** which students might use. These are intended as a **guide** only as students will produce a wide range of responses to each question.

Assessment of Quality of Written Communication (QWC)

Where students are required to produce extended written material in English, they will be assessed on the quality of written communication.

Students will have to:

- ensure text is legible; spelling, punctuation and grammar are accurate and meaning is clear
- select and use a form and style of writing appropriate to purpose and to complex subject matter
- organise information clearly and coherently, using specialist vocabulary when appropriate.

Quality of written communication will be assessed in all units in this specification via Assessment Objective 3.

Critical Thinking Mark Scheme

INTRODUCTION

The nationally agreed **assessment objectives** in the QCA Subject Criteria for Critical Thinking are:

- AO1** Analyse critically the use of different kinds of reasoning in a wide range of contexts.
- AO2** Evaluate critically the use of different kinds of reasoning in a wide range of contexts.
- AO3** Develop and communicate relevant and coherent arguments clearly and accurately in a concise and logical manner.

- Marks are allocated to the assessment objectives according to the nature of each question and what it is intended to test.
- For Section A, Examiners need only provide a total mark for each of the candidates' answers. They do not need to provide a breakdown by Assessment Objective.
- For Section B, Question 10, marks should be awarded according to the generic marking grid.
- Candidates should be able to achieve the highest marks with a selection of relevant points, not necessarily the complete range.
- **Indicative content is provided as a guide for examiners. It is not intended to be exhaustive and other valid points must be credited.**

Critical Thinking Unit 3 (CRIT3) Mark Scheme

Section A: Beliefs and claims

Question 1 refers to Document A.

No.	Question	AO:	1	2	3
1	In the Timeline (Figure 2) it claims that the first use of wheeled transport took place around 3500 BC. Explain one problem with making this claim.	[2 marks]	1	1	

It is obviously difficult to establish with any precision the details of something so long ago in the past.

Even though the claim lacks precision by the use of ‘around’, there are still all sorts of reasons why the claim is still too definite.

For example, drawing a claim about what *actually happened* from what we have (good) grounds for *believing* happened. Just because the earliest evidence of the wheel being used as a form of transport points to a certain time, it doesn’t mean that this actually was the earliest use. It may have been used earlier; we just don’t have any evidence of this.

The best we can hope for is to locate (approximately) in time the first *known* use of wheeled transport.

[1] for drawing attention to the timescale involved.

[+1] for suitable development.

(Development could be about the timescale, i.e. a clear further reason why this itself makes the claim problematic.)

[2] for recognising that what is the case doesn’t follow from what we believe to be the case.

Questions 2 to 5 refer to Document B.

No.	Question	AO:	1	2	3
2(a)	Read paragraphs 1 and 2 and consider the images, Figure 3 and Figure 4 . Give one reason for finding it puzzling or surprising that the Native Americans did not invent the wheel. [2 marks]		1		1

Likely choices will be things like:

The text claims they were ‘magnificently advanced’, yet the wheel is generally thought of as a fairly simple piece of technology.

It is hard to imagine how they could have built such immense structures as those identified in the images without the use of, e.g. some form of wheeled transport or at least some sort of system of pulleys.

(Accept any plausible reason for finding the view problematic.)

[2] for a clear reason.

[1] for a partial reason i.e. where the relevance/ significance/ meaning is less clear.

No.	Question	AO:	1	2	3
2(b)	Give an explanation for why the reason you identified in 2(a) does not necessarily prove that the Native Americans must have invented the wheel. [2 marks]		1		1

It may be that the wheel is more complex as a piece of technology than generally thought. This would mean that the fact that a civilisation is ‘magnificently advanced’ does not mean it must have invented the wheel. Moreover, ‘magnificently advanced’ is vague/ imprecise/ undefined. It is also relative – by what standards?

The second reason above can be countered by pointing out that the fact that it is difficult to conceive of how they managed to build these structures without the use of the wheel does not mean that they could not have done it. It could e.g. have just taken greater time/ labour; or they might have had their own (perhaps highly complex) mechanisms of which we are unaware, conditioned as we are to think of the wheel as being the way to move things. Candidates could point to the fact about the length of time it took to construct to corroborate this explanation.

[2] for a clear, plausible explanation.

[1] for a partial explanation, e.g. lacking clarity or relevance.

No.	Question	AO:	1	2	3
3	<p>Paragraph 3 refers to the ‘lack of actual positive evidence’ for the existence of the wheel amongst Native American cultures.</p> <p>Explain why this alone is insufficient to justify the inference that the wheel was therefore not invented by the Native Americans.</p> <p style="text-align: right;">[4 marks]</p>				
			3		1

Marks should be awarded according to the following level descriptors.

Level	Descriptor
Good: 4 marks	Clear explanation which shows sound/ clear understanding of the general logical rules regarding proving negatives & applies it successfully to particular situation; OR a thorough and convincing case for why in this particular case the inference is unwarranted
Intermediate: 2 – 3 marks	A reasonable case for establishing why the inference is unwarranted, with some understanding evident of the difficulty/ impossibility of proving a negative, and/ or a clear attempt to link it to the particular situation
Basic: 1 mark	Presents a case but with little recognition of the general rules / provides an explanation that does not link clearly to the particular situation

There are different ways candidates could explain this, but essentially, they need to convey the notion that it is impossible to prove a negative; that a lack of corroborating evidence of something existing or happening is not enough to warrant the inference that it therefore did/ does not exist (/ took place etc.) Candidates may wish to draw analogy with e.g. the existence of God/ spirits/ angels/ aliens etc.

In this case there are particularly good grounds for being cautious of the inference, since there are good reasons for thinking that the evidence may not be complete/ is corrupted in some way – for example the evidence may have perished, or simply not been found.

Candidates can be awarded full marks for a clear explanation/ account of the abstract rules about the logical impossibility of proving a negative; or if they base their answer in the particular circumstances alone. A clear explanation that fully answers the question should be credited.

No.	Question	AO:	1	2	3
4	How does the author use the evidence in paragraph 5 to support the hypothesis that the wheel was not invented by Native Americans? Assess how effective the evidence and reasoning are.				
		[6 marks]	2	3	1

Marks should be awarded according to the following level descriptors.

Level	Descriptor
Good: 5 – 6 marks	Well developed, appropriately weighted evaluation of the challenge made by the claims, counter claims, arguments on the hypothesis.
Intermediate: 3 – 4 marks	Some critical but under-developed evaluation of the effect of the claims on the hypothesis.
Basic: 1 – 2 marks	Some relevant critical comment on the hypothesis and counter-claims.

The reasoning runs: if the wheel had been invented, you would expect to see it used in pottery (the potter’s wheel). Since there is no evidence of this, again this confirms/ supports the hypothesis/ belief that the wheel was not invented.

Since it only claims that we would ‘expect’ to see it, the absence of (evidence of) a wheel being used in pottery is not enough to provide certain grounds for the belief that the wheel was not invented.

Nevertheless, this is still quite strong support. If indeed the conditional was true, i.e. if it was true that *if* the wheel had been invented, you would expect to see it used; and if it is true that it was not used, this provides a strong case for accepting the claim/ hypothesis.

Moreover, there is arguably more than ‘negative’ evidence: positive evidence that *other* methods of pottery were used that did not involve a wheel; and evidence that the potter’s wheel and transport wheel coincided elsewhere – which supports the expectation.

Other critical points could include:

We have the corroborating evidence of the pottery. Since this is likely to be quite extensive – armies of turned pots from Europe/ Asia/ Africa against not a single one found of the turned pots in the Americas, this strongly suggests this is correct/ very high likelihood this is correct.

Nevertheless, it is not absolute proof; it is still prone to the objection that simply none have been found/ remain. (Candidates should be credited for this observation. However, a top-level

response, if taking this line of discussion, ought to recognise that this seems unlikely though; why would none have been found? Why would none remain? If the others have been found/ remained, why not the turned ones? What mechanism would make one last and the other disappear? Without a plausible explanation here, it seems that the claim that they did not make such pots is highly credible.)

We also get the corroborating information from where the wheel was developed, showing that the potter's wheel seems to date from around the same time. On the back of this, a hypothesis is loosely suggested about the development of the wheel as a means of transport and the development of the potter's wheel – i.e. that one seems to be necessary for the other. (It doesn't say which way round this is, but this doesn't matter.)

Candidates could pick up on the looseness of the link. *Why* would you 'expect' to see the wheel used in pottery, say, if it was used for transport? If simply because the two apparently coincided in the 'Old World', then this link is quite weak. Presumably it is at least plausible that the wheel could have been developed for transport, but not for pottery.

Candidates could point to a level of ambiguity here: if it means they are both needed for each other, then of course this is nonsensical; the whole thing could not get off the ground. However, it is likely this is not the intended meaning; rather that one depends on the other; or: if you had the technology for one, it would be natural to apply it to the other. Also, there is an ambiguity in terms of necessary and sufficient conditions... Either way, the information supports the relationship. Yet the evidence is fairly meagre. We have a correlation between *two* events. This is not enough to warrant a causal inference. It could be a coincidence. However, the hypothesis that one is needed *would (neatly) explain* this finding, and therefore this gives the reasoning some support.

Whatever line of discussion candidates take, better answers are likely to recognise that, overall, the evidence is quite convincing. However, it is far from proof, for the reasons cited.

No.	Question	AO:	1	2	3
5	<p>In paragraphs 6 and 7 the finding of wheeled models or figurines is presented as ‘puzzling’.</p> <p>It has recently been established that similar models have been found in Central Europe and Asia; these models appear to pre-date the use of human-scale wheeled vehicles in those areas.</p> <p>Assess the impact of these more recent findings [in Central Europe and Asia], alongside the figurines found in Central America, on the hypothesis that the Native Americans did not invent the wheel as a form of transportation.</p> <p style="text-align: right;">[6 marks]</p>		2	3	1

Marks should be awarded according to the following level descriptors.

Level	Descriptor
Good: 5 – 6 marks	Well developed, appropriately weighted evaluation of the challenge made by the claims, counter claims, arguments on the hypothesis.
Intermediate: 3 – 4 marks	Some critical but under-developed evaluation of the effect of the claims on the hypothesis.
Basic: 1 – 2 marks	Some relevant critical comment on the hypothesis and counter-claims.

The figurines are presented as being surprising/ puzzling. As the text explains, this is because they provoke the question as to why, if the Native Americans were aware of the wheel, they did not get round to using it/ adapting it for e.g. transport purposes/ why they only used it for simple children’s toys/ religious artefacts. Taken at face value, the figurines found in Central America provide disconfirming evidence for the hypothesis at least that the Native Americans did not invent the wheel per se (it seems they DID).

However, these findings alone are not sufficient to falsify this hypothesis. First, these figures do not show the wheel being used as a form of transport (candidates would be justified in simply classing them as irrelevant to this effect.) For them to count as evidence against the hypothesis, you need to make the assumption that, if the wheel had been invented/ used on this scale, it must mean that it had been invented/ used at a larger (i.e. human) scale. This is unwarranted – it may be that the technology was more complex, or that there were other prohibitive factors e.g. their religious significance, or the practicality of its application (as developed in Document C)

Secondly, and more importantly, the findings in Central Europe provide an analogous case of models being invented BEFORE the wheel was actually used for transport. This means that, arguably, the findings of the figurines here are entirely consistent with the hypothesis that they had

not used the wheel (or at least, that an exactly similar problem of why the models appeared before the wheel exists elsewhere. While this is hard to explain, it makes it more likely to be true.)

Candidates may decide to offer an explanation for *why* these figurines seem to pre-date the use of (human scale) wheeled transport. For example, it could be that these miniature models are a form of prototype – early attempts to construct the wheel while the technology is in its infancy.

While this is not necessary for full marks, any plausible attempt to explain away the apparently anomalous evidence should nevertheless be credited.

Question 6 refers to Document C.

No.	Question	AO:	1	2	3
6	In paragraph 1 , it is claimed that ‘humans managed perfectly well without wheeled transportation during most of prehistory’. Critically assess this claim.				
		[5 marks]	2	3	

Marks should be awarded according to the following level descriptors.

Level	Descriptor
Good: 4 – 5 marks	Clearly expressed assessment of the claim, together with relevant and convincing reasons to support the assessment.
Intermediate: 2 – 3 marks	Some appropriate assessment of the claim, with one or more reasons that are likely to be sketchy or under-developed.
Basic: 1 mark	Some relevant comment on the plausibility or acceptability of the claim.

The credibility of this claim can be questioned on the grounds that it is making a fairly strong/decisive (judgement) claim about the distant past, which in itself is difficult (impossible) to do. (Prehistory is by definition an area we have little or no record of, so again this means any such claims can only be conjectural at best.)

There is also a problem with the claim’s meaning. Who is to say – and indeed, what does it *mean* to say – that ‘humans managed perfectly well’? All the authors are really justified in saying is that humans somehow managed. (Moreover, perhaps they didn’t: you could say humans ‘managed perfectly well before the invention of antibiotics’, but clearly many didn’t/ (arguably) they would have managed a lot *better* with them!)

There is a loose sense in which the claim is warranted/ carries meaning (in that humans didn’t perish during this time, and indeed obviously must have also developed), but this is a far cry from saying they ‘managed perfectly well’. Therefore even given a charitable interpretation, the claim is at least a little dubious.

[TOTAL Section A: 27 marks]

Section B: Arguments

Questions 7 and 8 refer to Document C.

No.	Question	AO:	1	2	3
7	<p>In paragraphs 2 to 5, the authors compare conditions in Central and South America with those where the wheel was developed as a form of transport, in order to (help) explain why the wheel was not adopted by the Native Americans.</p> <p>How convincing is the case presented in these paragraphs?</p> <p>Explain and evaluate both the reasoning and evidence deployed.</p>				
		[10 marks]	4	4	2

Marks should be awarded according to the following level descriptors.

Level	Descriptor
<p>Good: 8 – 10 marks</p>	<p>Candidates' analysis of the reasoning/ use of evidence is correct/ convincing. Critical comments address both the reasoning and the evidence used, and two or more relevant, perceptive, and <i>thoroughly</i> developed critical comments are presented. Overall assessment is reasonable and fair.</p>
<p>Intermediate: 4 – 7 marks</p>	<p>Candidates' analysis of the reasoning/ use of evidence is partially correct, yet contains errors or significant omissions. EITHER: Critical comments address both the reasoning and the evidence used, and two or more relevant but perhaps partially explained points are presented; OR: Critical comments are effective, yet fail to address either the reasoning or the use of evidence. Overall assessment is plausible and largely fair.</p>
<p>Basic: 1 – 3 marks</p>	<p>Some relevant evaluative judgement related to the strength or weakness of the reasoning or use of evidence offered, with some basic (usually under-developed) attempt at explanation or justification. Overall assessment is either lacking or lacking justification.</p>

Both paragraphs 2-3 and 4-5 set out the 'special' conditions (i.e. necessary?) required for the development of the wheel; they then argue that (since) these conditions were (largely) absent, this explains why the wheel was not used. These first two lines of reasoning present a strong case/ good argument, because, if correct, and these conditions are indeed necessary, it would satisfactorily explain both why wheels were *not* used there and also why they *were* used in Central Europe-Asia. Thus, the explanation they offer is successful in terms of scope.

On the surface, both conditions seem highly plausible. There are however, some possible problems/ inconsistencies in terms of the evidence they give, which (arguably) slightly weakens the case. The first condition posited is that of the terrain, and a good case is made for the terrain being inappropriate. However, the author concedes that they did have the technology (to some extent) to adapt to this terrain, and indirectly concedes that there was also some 'flat terrain'. Being charitable, we could assume that these are relatively minor concessions and that the general point still remains.

Of the two conditions, the second (lack of animal draught) is presented as being a stronger factor. Again a good case is made, and the hypothesis that this condition is necessary seems highly plausible, yet this too has some awkward / 'anomalous' evidence, such as the existence of the bigger animals 'further south'. Candidates could point to a possible contradiction/ incoherence/ inconsistency here: given that the lack of draught animals is being presented as the / a principal explanation for why the wheel wasn't invented, why was this not the case where such animals did exist? The authors seem to skate over this quite rapidly by simply saying 'they were not aware of the wheel' – why not? If they lacked the inhibiting factor, what stopped them?

One way to defend this would be to argue that this anomaly can be explained if taken alongside the terrain explanation. While the animals might have existed 'further south in the Andes', the terrain here might have been prohibitive (indeed this is likely given that the Andes are a mountain range!) Furthermore, llamas and alpacas are not really especially strong (when compared to e.g. horse or oxen); therefore, the anomaly is only slight. Either way, it could be argued that a coherent (and defensible) case remains.

Other points to consider could be that it's not clear whether these 'special' conditions are being presented as out and out necessary, or merely helpful contributors, and therefore there is an element of vagueness here that makes decisive evaluation hard. It could also be worth noting the inherently limited nature of the hypotheses in question, given that they only have the one example of the conditions where the wheel was invented and the one where it wasn't; any attempt to form general rules/ laws based on these are likely to be tentative at best. Candidates should be credited for recognising the field of knowledge in which the debate is taking place (i.e. History/ Archaeology), its inherent obstacles for knowledge construction, and the implications for the kinds of knowledge/ degrees of certainty achievable.

On the whole, the case is quite compelling, but candidates ought to recognise that it is not without its problems. Convincing judgements are likely to vary from considering the case made to be pretty good, to flawed.

No.	Question	AO:	1	2	3
8	How effective is paragraph 6 as a supplement to the reasoning in paragraphs 2 to 5 ?	[6 marks]	2	3	1

Marks should be awarded according to the following level descriptors.

Level	Descriptor
Good: 5 – 6 marks	Two or more clear and effective critical comments are made. Analytical points, if offered, are correct/ convincing; evaluative comments are relevant, perceptive, and <i>thoroughly</i> developed. Overall assessment is reasonable and fair.
Intermediate: 3 – 4 marks	Two or more critical comments are made. EITHER: One is strong, the other less so; OR: points generally lack sufficient development or explanation. Analytical points, if offered, are partially correct; evaluative comments are relevant yet lack some clarity/ justification. Overall assessment is plausible and largely fair.
Basic: 1 – 2 marks	Some relevant critical comments are attempted, with some basic (usually under-developed) attempt at explanation or justification. Analytical points, if offered, contain errors, and evaluative comments fail to convince. Overall assessment is either lacking or lacking justification.

Candidates ought to recognise that in paragraph 6 a further explanation is offered for why the wheel was not adopted by Native Americans.

The explanation/ reasoning in this paragraph differs from that of paragraphs 2-5 in that it follows a different logical form. Rather than setting out a (single) necessary condition that was not met (and thereby making, or attempting to make, a clear cut case for why the wheel was not deployed), it makes a (subtler) case for saying that there wasn't really a (perceived) need. The reasoning is accumulative, layering up a case with a series of assertions. (Candidates who recognise this as a different method of reasoning ought to be credited, although this observation is not essential.)

The reasoning here is arguably less persuasive. It relies on far more speculative 'evidence' (i.e. what their attitudes/ concerns/ preferences were etc.) It is also (arguably) more noticeably at odds with the evidence in places. For while the overall point is that the existing methods of transport were fine/ adequate/ sufficient, there is reference to e.g. 'caravans of human porters' trekking 'vast distances carrying goods on their backs'. It also talks of them using water 'wherever navigable lakes, rivers and coastal waters allowed it'. None of this makes an especially convincing case for there being a 'system efficient enough' for their needs, for there being 'no cause for innovation'. If the reason was that the terrain was prohibitive, the authors claim that 'the same modes of transport

continued even after the Spaniards introduced wagons, carts, and draught animals.’ If these could be introduced effectively, it seems there was plenty of opportunity for innovation.

There is also a case for saying it doesn’t fit particularly well, not just with the facts, but with the other explanations given. After all, if the principal reasons were that the conditions were simply not appropriate – if necessary conditions were simply not met – it is largely irrelevant whether or not they ‘preferred’ their own methods of transport. If there is something to this explanation, i.e. if there was a choice to be made, then it would seem the previous explanations/ hypotheses are exposed as being weakened (or even mistaken). Indeed, as mentioned above, some of the information in this paragraph intended to support this hypothesis (such as their preferring to stick with their traditional methods of transport ‘even after the Spaniards introduced wagons, carts, and draught animals’) seems to contradict the explanations/ lines of reasoning elsewhere. There is a sense to which the separate explanations, rather than working together to make a stronger case, cancel each other out/ are mutually exclusive.

It could however be argued that, as a further inhibiting factor, the explanation offered here is (just about) plausible; and therefore could argue that, since it doesn’t directly contradict others, could further strengthen the overall case.

Question 9 refers to Document D.

No.	Question	AO:	1	2	3
9(a)	Explain the reasoning in the argument presented in Document D , identifying any conclusions drawn and the reasons given. [6 marks]			4	2

Marks should be awarded according to the following level descriptors.

Level	Descriptor
Good: 5 – 6 marks	Candidates give an analysis of the way the reasoning works that is both thorough and accurate.
Intermediate: 3 – 4 marks	Candidates give an analysis that correctly identifies some of the key parts of the argument and/ or correctly explains some of the reasoning.
Basic: 1 – 2 marks	Candidates correctly identify at least one part of the argument; OR: show understanding of the terminology and/ or methodology relating to argument analysis even though their analysis is incorrect.

The author explains why the Native Americans did not invent the wheel by:

- (a) arguing that the wheel is a far more complex invention than many people think (which in itself partly explains why / makes it less surprising that they had not happened upon it).
- (b) positing that its complexity meant that it might well have only been invented once; and that whereas it had spread across Europe, Asia and Africa, it simply hadn't reached the Americas.

In presenting this as an explanation, the author dismisses alternative explanations (such as those in Document C) on the grounds that they are based on a false assumption regarding the perceived complexity of the wheel.

The argument can be summarised/ the reasoning analysed as follows:

C - It's not surprising that the Americans didn't invent the wheel (i.e. this can be adequately explained)

(because)

1. IC – the wheel is far more complex than many people think

And

2. Hypothesis – it was probably only invented once, and then spread; however, for geographical reasons etc. it didn't reach Native Americans

Reasons are offered in support of the IC illustrating the wheel's complexity. This line of argument is also used to support a separate (implied) conclusion:

(implied) C - That other explanations (based on the assumption that the wheel is simple) are wrong/ mistaken/ incorrect.

No.	Question	AO:	1	2	3
9(b)	Identify two ways in which the explanation in Document D is better than those in Document C . (You may refer to one or more of the explanations given in Document C.)				
		[6 marks]		4	2

Marks should be awarded according to the following level descriptors.

Level	Descriptor
Good: 5 – 6 marks	Two discrete and convincing reasons as to why the Document D explanation is better. Responses demonstrate sound understanding of the requisite methodology and evaluative comments are clear and effective.
Intermediate: 3 – 4 marks	EITHER: One reason given is clear and convincing, the other has some merit but lacks clarity or justification; OR: two reasonably well-made points as to why the Document D explanation is better. Some familiarity with the methodology is shown; comments are largely clear but with varying degrees of effectiveness.
Basic: 1 – 2 marks	One or more reasons attempted yet neither is sufficiently clear or developed. EITHER: Some relevant comment on the hypotheses and/ or supporting evidence, yet little familiarity with the requisite methodology shown; OR: Response shows some knowledge of the methodology/ terminology, but reasons cited/ application to the materials lacks relevance/ clarity and effectiveness.

- Assuming that the description of/ judgement regarding the complexity of the wheel is correct, as stated, this avoids making a false (yet understandable, given the fact that the wheel is often used as the paradigm example of a basic invention) assumption, which is arguably true of the other theories on offer.

If the claims about the wheel are correct, then this gives a simpler/ better/ more satisfying explanation for why the wheel was not adopted.

- As well as the assumptions identified, this tackles / avoids the (somewhat unconvincing) assumption that they *chose* not to use it.

The idea that they chose not to use it when they were perfectly capable of doing so is problematic; while the lack of draught animals/ topography largely supports this notion, when analysed there are weaknesses with this view (see questions 7-8). It ends up relying on the rather hazy notion that human societies are integrated wholes etc., a general principle that humans are resistant to

change. While this may be true to an extent, it is insufficient to explain why a clearly useful piece of technology would not be adopted over lengthy enough period of time.

The explanation presented here does not suffer from these problems. If they were unaware of/ unable to construct the technology required for wheeled transport, this would explain why they were not using it anywhere.

- This explanation is good because it not only explains why they didn't have it (without awkward conflicting evidence as per Doc C); it also explains why ONLY THEY didn't have it. (Therefore, better on scope.) Another way to put this is that it explains why Native Americans are apparently an anomaly amongst early civilisations in that they didn't have the wheel; or even explains the anomaly away (as being no longer an anomaly).

- For above reason, (if the final conjecture is true, about the single origin of the wheel) it explains the puzzling situation of why, given that all other cultures apparently invented the wheel, the Native Americans didn't: the other cultures HADN'T all invented the wheel, they just adopted it once had been introduced to them.

Again, since this is another problem explained away by this theory, this could be considered a further strength in terms of scope.

- Also (arguably) good on simplicity; doesn't need to add the theory about human reluctance to change, to explain e.g. why they would CHOOSE not to use it when benefits are apparent/ undeniable.

Candidates could also point to the further corroborating evidence of the geographical/ historical points as mentioned here and also in Doc A

NOTE: *It could be that the two explanations work together to an extent: the reason the innovations were not happened on were because there was not so much need for it (the wheel) – necessity being the mother of invention. Although the question does not ask for this, candidates ought to be credited with this as part of the development criteria in the level descriptors*

No.	Question	AO:	1	2	3
10	<p>'History – especially ancient history – can only be at best a matter of interpretation. There is no such thing as a historical fact.'</p> <p>Write a reasoned argument in response to the above position.</p> <p style="text-align: right;">[15 marks]</p>				15

For Question 10 use the Generic mark-grid, page 25.

Suggested lines of argument:

Candidates can be credited for giving supporting lines of argument which show the problems that (ancient) history has in terms of providing certainty. The nature of the distant past and the elusiveness of direct evidence; the fact that new discoveries can emerge which counter previous beliefs, themselves certainly held. And, the problems entailed by drawing conclusions about e.g. human cultures and beliefs from what they leave behind.

Candidates can support the citation by saying that, interpreted charitably, it is not really talking about what happened e.g. this morning or yesterday or even within living memory; and that, if the focus is to be on the distant past, then this is a reasonable position to take.

Better answers will make a distinction between the kinds of knowledge history attempts to provide: certainly, if historians are seeking causes or explanations for historical findings or phenomena then the citation is difficult to challenge. However, if it is simply a case of locating things within a certain time period, or simply saying, for example, that the Egyptian people built pyramids, then this kind of thing seems harder to deny the status of fairly simple facts.

There is also room for a more philosophical discussion of the nature of facts in general and whether or not any facts can be deemed free of interpretation/ what is meant here by 'fact' and 'interpretation'. Candidates could expose a possible false dichotomy here: perhaps something can be both a matter of interpretation and of fact.

[TOTAL Section B: 43 marks]

Generic mark-grid for Section B, Question 10:

CRITERION:	Award level		
	<i>Thoroughly met, well-structured and clearly expressed</i>	<i>Partially met with adequate expression and structure</i>	<i>Inadequately met. Basic response with some weaknesses of expression / structure</i>
Appropriate conclusion, relevant to the question and consistent with candidate's reasoning.	3	1 – 2	0
Strong supporting reasons: 2 or more, or 1 thoroughly developed.	5 – 6	3 – 4	1–2
<i>Supplements to reasoning (1 or more of): example; analogy; evidence; explanation; principle; reasoning; anticipating and responding to objections.</i>	5 – 6	3 – 4	1–2

- NB Candidates are not rewarded for exhibiting additional knowledge per se, but for the use they put it to in their reasoning if they choose to introduce it. Conversely, there is no penalty for not exhibiting additional knowledge: use of the documents alone is sufficient for awarding full credit (5 – 6).

Distribution of marks across the questions and assessment objectives for Unit 3

AO Balance	AO1	AO2	AO3	Totals
Qu 1	1	1		2
Qu 2(a)	1		1	2
Qu 2(b)	1		1	2
Qu 3	3		1	4
Qu 4	2	3	1	6
Qu 5	2	3	1	6
Qu 6	2	3		5
Total Section A	12	10	5	27
Qu 7	4	4	2	10
Qu 8	2	3	1	6
Qu 9(a)		4	2	6
Qu 9(b)		4	2	6
Qu 10			15	15
Total Section B	6	15	22	43
Paper Total: [70] Marks	18	25	27	70
Paper Total: [70] Percentage	26%	36%	38%	100%