

# Cambridge International AS & A Level

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**THINKING SKILLS****9694/41**

Paper 4 Applied Reasoning

**October/November 2024****MARK SCHEME**

Maximum Mark: 50

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**Published**

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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 October/November 2024 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

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This document consists of **13** printed pages.

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**

Annotation	Meaning and use
	Correct response. Use when a mark has been achieved in Q1, 2 and 3.
	Incorrect (part of a) response
	Not good enough. Use when a response is partly correct but is insufficiently creditworthy for a mark to be awarded.
	Benefit of doubt
	Strand of reasoning
	Main Conclusion
	Intermediate Conclusion
	Additional argument element in Q1 / Argument element in Q4
	Creditworthy material in the Use of Documents skill
	Use stamps 1–5 alongside U to indicate which document has been referenced
	Evaluation of documents
	Comparison of or inference from documents
	Creditworthy material in the Quality of Argument skill
	Treatment of counter-position

<b>Annotation</b>	<b>Meaning and use</b>
<b>L2</b>	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
<b>SEEN</b>	Examiner has seen that the page contains no creditworthy material Use to annotate blank pages
<b>Highlight</b>	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)	We should ban the advertising of junk food.	1
1(b)	<i>1 mark for each correctly identified IC</i> <ul style="list-style-type: none"><li>• Junk food is undoubtedly bad for our health.</li><li>• (It follows that) junk food advertising increases the consumption of junk food.</li><li>• (so) a ban on junk food advertising would significantly decrease junk food consumption.</li></ul>	3

Question	Answer	Marks
1(c)	<p><i>Award 1 mark for each of the following [max 2]:</i></p> <p>R1 So-called 'lifestyle diseases',... are the biggest avoidable killers in the modern world.      Ex (such as) heart disease*</p> <p>Cass These diseases are associated with some unavoidable factors,      Ex (like) age or genetic predisposition*</p> <p>R2 (Nevertheless,) one of the biggest avoidable factors is the consumption of high levels of what is described as junk food.</p> <p>C So we should do what we can to reduce that.      A We should do what we can to reduce avoidable deaths.</p> <p><i>* Credit only one of these</i></p>	2
	<p><i>Award 1 mark for identifying two relationships between elements, e.g.,</i></p> <ul style="list-style-type: none"> <li>• R1 supports C.</li> <li>• R2 supports C.</li> <li>• Ex illustrates R1.</li> <li>• Ex illustrates CAss.</li> <li>• A is needed in order for R2 to support C.</li> </ul> <p><i>Reference to start and end of elements must be unambiguous.</i></p> <p><i>Sample 3-mark answer</i></p> <p>'Lifestyle diseases are the biggest avoidable killers in the modern world is a reason [1] that is illustrated by the example 'heart disease' [1]. This reason, together with a second reason, 'one of the biggest avoidable factors is the consumption of high levels of what is described as junk food' [1], support the conclusion of the paragraph [1].</p>	1
1(d)	<p><i>1 mark for a version of any of the following</i></p> <ul style="list-style-type: none"> <li>• Banning the advertising of junk food represents a small-scale intervention.</li> <li>• An unsuccessful attempt at banning junk food would bring no benefit.</li> </ul>	1

Question	Answer	Marks
2(a)	<p>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]</p> <p><i>Paragraph 3:</i></p> <ul style="list-style-type: none"> <li>• <i>Rash generalisation</i> – the data comes only from one country but the conclusion appears to be much more general</li> <li>• <i>Conflation</i> – of fast food with junk food</li> <li>• <i>Weak support</i> – percentage increase might represent a very small actual increase if the baseline value is low</li> </ul> <p><i>Paragraph 4:</i></p> <ul style="list-style-type: none"> <li>• <i>Reliance on questionable assumption</i> – that the successful effect of advertising is to increase consumption (rather than, say, to increase market share)</li> <li>• <i>Weak analogy</i> – there are likely to be significant differences between smoking and the consumption of junk food. For example, junk food might well be better for health than no food at all.</li> <li>• <i>Causal flaw</i> – the final IC makes the <i>cum hoc</i> assumption that an advertising ban caused the reduction in smoking levels when there are likely to have been other causes.</li> </ul> <p><i>Paragraph 5:</i></p> <ul style="list-style-type: none"> <li>• <i>Disproportionate appeal to authority</i> – experts like health professionals are prone to place too much importance on their area of expertise.</li> <li>• <i>Insufficient support</i> – the evidence from the parental poll is about advertising to children, not advertising <i>per se</i>.</li> <li>• <i>Irrelevant appeal to authority</i> – the opinions of parents are not necessarily relevant when making decisions about public health.</li> <li>• <i>Rash generalisation</i> – from the opinion of healthcare professionals and/or parents to overall public opinion.</li> </ul>	6
2(b)	<p>Throughout the document the author uses the term ‘junk food’ without defining it [1] and in this paragraph the author begs the question by claiming that the term is unambiguously understood [1]. If the term is not well understood / is difficult to define legally then the conclusion of paragraph 6 is not supported at all [1] and so the paragraph offers no support to the conclusion [1].</p> <p>The comparisons with alcohol (and to a lesser extent tobacco) consumption do provide some support to the MC [1] as both are popular but injurious to health [1] and there is clear evidence that the introduction of advertising restrictions is practical [1].</p>	3

Question	Answer	Marks
3(a)	<p><i>1 mark each for a version of any of the following points [max 3]</i></p> <ul style="list-style-type: none"> <li>There is no data about the size of the price reductions offered. It is possible that large discounts are offered on healthy products and only minimal discounts on unhealthy products.</li> <li>There is no data about the duration of the promotions. Those offered on healthy foods could be for a longer period of time than those offered on unhealthy foods.</li> <li>The total percentage adds up to 100, which implies that all foods are categorised as either healthy or unhealthy, so the distinction may not be significant for many of the foods in the middle of the range;</li> <li>so it is possible that the numbers represent extremely healthy foods and only minimally unhealthy foods.</li> <li>If more than 54% of the foods stocked by supermarkets is deemed unhealthy then 54% of promotions is lower than would be expected if promotions were evenly distributed.</li> <li>It is possible that some of these products were 'priced to discount', making the discount offered illusory</li> </ul>	3
3(b)	<p><i>1 mark each for a version of any of the following points [max 3]</i></p> <ul style="list-style-type: none"> <li>The claim is about sugar intake whereas the data is about sugary drinks</li> <li>It is possible that any decrease in sugary-drink intake was offset by an increase in sugar intake via food</li> <li>'Litres of sugar-sweetened drink' is an indirect measure of sugar intake – it would be unreliable if the sugar content of these drinks was not constant</li> <li>Any real reduction might not be as a result of the tax introduction as it is likely that other measures, such as a public awareness campaign, were increased over the same time period</li> <li>It is not possible to infer a trend from only 2 years of data</li> <li>The 9-year figure shown could represent an increase then a plateau with the 2011 to 2013 figures being atypically high</li> <li>The drop from 2013 to 2014 is only about a 3% change, which is not significant in view of the natural variation seen elsewhere in the data</li> </ul>	3

Question	Answer	Marks
4	<p><b>'Governments should take action to reduce consumption of unhealthy food.'</b></p> <p><b><i>Example high-scoring answers</i></b></p> <p><i>Argument to support (757 words)</i></p> <p>'Unhealthy' foods must, by definition, be bad for you but the fact that this definition is somewhat circular is irrelevant to the issue. One thing we can all agree on is that certain foods, notably those containing high levels of salt, sugar and saturated fat, are bad for health. That they are a major cause of heart disease is cited by both D1 and D3. The dietician, who presumably has some expertise, in D2, supports the fact that these foods have negative effects on health as does comment D in D5. The research cited in D1 as support is, despite its hasty generalisation, consistent with this point.</p> <p>A government has a responsibility in three areas that are relevant to this issue: for its country's economy, for the prudent distribution of public funds and, ultimately, for the care of its citizens. In each of these areas of responsibility, restricting access to unhealthy foods could help. D3 mentions high costs to the economy from days lost to ill health and comment L from D5 seems to illustrate this with an example, if one assumes, not unreasonably, that the unfortunate worker's heart attack was associated with an unhealthy diet. D3 also mentions a large amount of money spent on healthcare which, at least in Mexico, it seems the government has some responsibility for.</p> <p>Some might say that an individual's health is entirely their own responsibility and the principle of freewill overrides any paternalistic duty of care that a government has to its citizens. However, we often overlook the freewill principle when it comes to children, which Documents 2 and 3 imply are some of the main consumers of unhealthy food. Furthermore, freewill only extends as far as the point at which one person's behaviour harms another – it could easily be argued that the sales representative's consumption of burgers in D5L has harmed the company he works for and hence the lives of the owner and other staff. Governments have little hesitation in restricting other things that are injurious to health where the principle of freewill would similarly apply – D1 mentions the analogy with restricting tobacco advertising but most countries also have restrictions on other substances, such as alcohol. So freewill cannot be used as a deal-clinching counterargument.</p> <p>D2 worries that restrictions might be counterproductive but offers only anecdotal evidence for this. Meanwhile, D2 implies that the figure of 200 g per student is small but, for all we know that might represent an effective reduction for many students. D1's cites a drop in smoking levels which might not be entirely caused by a ban in advertising but is likely to be at least partially as a result of a range of restrictions. The graph in D4B might not show a convincing and consistent drop in junk food consumption after a tax hike but it is consistent with the intervention (and perhaps others at the same time) having had some effect.</p>	27

Question	Answer	Marks
4	<p>Comment A in D5 suggests that restrictions would be impractical because of a difficulty in defining 'unhealthy food'. However, just because something might be difficult does not mean that it is impossible, or that we ought not to try. Clearly Mexico has found a workable definition and it would seem from D3 that the UK, Norway, and Quebec have also; as has the school in D2, the supermarkets in D4A and the University of Minnesota study in D1. The author of D1 might have conflated 'junk' with 'fast' but presumably the university academics have some expertise in the area and are unlikely to suffer from a vested interest to do anything other than get at the truth. Moreover, the school in D2 and the D1 study obviously had a definition, despite the conflation. Comment A in D5 cites a difficulty in 'drawing a line' as a reason to question restrictions but we make arbitrary decisions like this all the time, such as the legal age at which alcohol, or driving a car, is allowed.</p> <p>'Restrict' does not mean ban altogether. There are many options a government could take to reduce consumption. Advertising restrictions (including or short of a total ban) are mentioned in documents 1 and 3 and tax incentives are mentioned by documents 3, 4B and 5C. D2 mentions school-based measures and D4A implies that supermarkets could easily remove price promotions on the most unhealthy foods.</p> <p>If access to healthy foods were restricted it would be beneficial, within the remit of governments, and practical to implement. Therefore governments should take action to reduce consumption of unhealthy food.</p> <p><i>Argument to challenge (739 words)</i></p> <p>For a variety of reasons, governments should not take action to reduce consumption of unhealthy food.</p> <p>First and foremost, it is not the responsibility of a government to interfere in the lives of its citizens, as the author of comment B in D5 would probably agree. If I want to increase my risk of a heart attack by eating more burgers, that decision is mine. Likewise, if I want to eat more vegetables, that is my decision. Such actions do not directly harm others and hence are no business of government. Some, such as the author of D2 and perhaps some sections of the Mexican Government in D3, might suggest that children are not capable of making informed decisions about food, but the people who should decide what children eat are their parents, not some far away elected official. It is no wonder the parents mentioned in paragraph 4 of D2 were not happy. Claims about some vague future harm to the economy cited in D3 are not sufficient reason to curb people's freedom. The economy of a country is uncertainly influenced by many factors and citing one of them as a reason to control what people eat is authoritarian in the extreme. One could equally claim that overweight people benefit the economy by keeping food suppliers, health workers and outsize-clothing manufacturers in business. Or indeed by dying early and so not becoming a burden on relatives, pension funds or the healthcare system.</p>	

Question	Answer	Marks
4	<p>Analogy with restricting other things that are injurious to health do not stand up to scrutiny. Smoking, as cited in D1, is not good for health at any level but any food, however 'unhealthy', can have benefits in moderation or for certain groups as comments F, G and H in D5 illustrate – comment E also implies that there is a group that would not be badly affected by the consumption of 'junk' food. Other injurious things have fewer discernible benefits. We should not be restricting something which is harmless for many and beneficial for some.</p> <p>This leads on to problems with the definition of what constitutes an 'unhealthy' food, as mentioned by comments A, G and H in D5. Leaving aside the obvious circularity of the definition, what is unhealthy for some might be healthy for others, as illustrated by comment G in D5. D1 uses the deliberately pejorative term 'junk' food, presumably to subconsciously influence the reader. D1 then begs the question by assuming an understood definition with no support and goes on to conflate 'junk' with 'fast' in the one piece of hard evidence cited. Documents 2, 3 and 4 obviously have what they consider to be working examples of what 'unhealthy food' is but 4A implies that all foods are either 'healthy' or 'unhealthy'. This binary division of what is presumably a continuum is ridiculous. Even if we agree that arbitrary lines sometimes need to be drawn, drawing one in the middle and stating that 'everything above is bad, everything below is good' is ridiculous.</p> <p>Public opinion is irrelevant to most issues and D1's citing of parental opinion in favour of a ban of advertising is weak: presumably the leading word 'junk' was used in the question and 62% is not surprising figure in response to a question where respondents were asked if they agree. The example of the parents in Doc 2 illustrates the weakness of D1's claim.</p> <p>There is little dispute that certain foods are injurious to health, as stated in D1 and assumed or implied by all the other documents. However, if the goal is improving public health there are many other less controversial things that governments could do. Being told we can't do something by an authoritarian government often leads to public resistance and can increase the behaviour being discouraged – the increase in alcohol consumption in the US during the prohibition era is a famous example and the diet expert in D2, together with comment I in D5, thinks this might be a real possibility with regard to unhealthy food. There is little evidence that any food interventions have worked anyway. The school intervention in D2 had a minimal effect and D4 does not convince anyone, for reasons listed in question 3, of any long-term improvements in health following a sugary-drink tax hike.</p> <p>A much better approach, as the dietitian in D2 would probably agree, is to educate people about food and health and let them make their own decisions.</p>	

Level	Structure*	Use of documents	Quality of argument			
	<ul style="list-style-type: none"> <li>Conclusion (MC)</li> <li>Intermediate conclusions (ICs)</li> <li>Strands of reasoning</li> <li>Examples or evidence</li> <li>Original analogy</li> <li>Hypothetical reasoning</li> </ul>	<ul style="list-style-type: none"> <li>Reference to documents</li> <li>Evaluation of documents</li> <li>Comparison of documents (corroboration or contradiction)</li> <li>Inference from documents</li> </ul>	<ul style="list-style-type: none"> <li>Comprehensive and persuasive argument</li> <li>Logical order of reasoning</li> <li>Relevant material</li> <li>Treatment of counter-positions</li> <li>Absence of flaws and weaknesses</li> <li>Non-reliance on rhetorical devices</li> </ul>			
3	Excellent use of structural elements: <ul style="list-style-type: none"> <li>Precise conclusion</li> <li>Multiple valid explicit ICs that support the MC</li> <li>Multiple clear strands of reasoning</li> <li>Some effective use of other argument elements to support reasoning</li> </ul>	7–9	Excellent use of documents: <ul style="list-style-type: none"> <li>Judicious reference to at least three documents</li> <li>Multiple valid evaluative points, clearly expressed and used to support reasoning</li> <li>Some comparison of or inference from documents</li> </ul>	7–9	Excellent quality of argument: <ul style="list-style-type: none"> <li>Sustained persuasive reasoning</li> <li>Highly effective order of reasoning</li> <li>Very little irrelevant material</li> <li>Key counter-position(s) considered with effective response</li> <li>Very few flaws or weaknesses</li> <li>No gratuitous rhetorical devices</li> </ul>	7–9
2	Good use of structural elements: <ul style="list-style-type: none"> <li>Clear conclusion</li> <li>More than one valid IC (may be implied)</li> <li>Some strands of reasoning</li> <li>Some use of other argument elements</li> </ul>	4–6	Good use of documents: <ul style="list-style-type: none"> <li>Relevant reference to at least two documents</li> <li>At least two evaluative points used to support reasoning</li> <li>May be some comparison of or inference from documents</li> </ul>	4–6	Good quality of argument: <ul style="list-style-type: none"> <li>Reasonably persuasive reasoning</li> <li>Unconfused order of reasoning</li> <li>Not much irrelevant material</li> <li>Some counter-position(s) considered with some response</li> <li>Not many flaws or weaknesses</li> <li>May be some reliance on rhetorical devices</li> </ul>	4–6
1	Some use of structural elements: <p><i>There may be:</i></p> <ul style="list-style-type: none"> <li>Conclusion</li> <li>Implied ICs</li> <li>Some strands of reasoning</li> <li>Some use of other argument elements</li> </ul>	1–3	Some use of documents: <p><i>There may be:</i></p> <ul style="list-style-type: none"> <li>Reference, perhaps implicit, to a document</li> <li>Some evaluation of a document</li> <li>Some comparison of or inference from documents</li> </ul>	1–3	Some quality of argument: <p><i>There may be:</i></p> <ul style="list-style-type: none"> <li>Some support for the conclusion</li> <li>Some order to the reasoning</li> <li>Some relevant material</li> <li>Some counter-position(s) considered with some response</li> </ul>	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