

**MARK SCHEME for the May/June 2012 question paper
for the guidance of teachers**

9694 THINKING SKILLS

9694/22

Paper 2 (Critical Thinking), maximum raw mark 45

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.

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1 (a) Look at Source B. How reliable is Mr Smith's account of what happened?

Indicative content

He has a broad vested interest to represent events in a light favourable to himself [1]. His point that the roof tile fell off is likely to be true as it can be easily verified [1]. However, whether it 'just missed' one of his children may be a case of exaggeration perhaps to bolster a claim against the company [1]. There are no independent witnesses to this [1]. His point about the incompetence of the rep does seem to be corroborated by her own blog in Source E [1]. The poor build quality is consistent with what the building employee tells us in Source C [1]. Mr Smith is perhaps feeling guilty about not researching the holiday more carefully but it is difficult to see why this would affect the reliability of his claims [1]. It would explain why he wrote a letter to a holiday magazine and that he was confident that the claims he made were true [1]. Therefore his account is largely reliable apart from the 'just missed' point [1].

Award mark for judgement only if the judgement is supported.

(b) How useful is the evidence from the local building employee in Source C? [3]

Indicative content

Very useful [1]. His evidence is highly credible as it seems to be the reverse of what one might expect him to say in the light of his vested interest [1]. He is also an 'insider' who has good knowledge of the company and its practices [1]. It gives powerful support to the idea that the villas were badly built and therefore backs up Mr. Smith's account [1]. It seems to suggest a wider culture of poor regulation as he would not say this if he thought he would get into trouble with the government or his employers [1]. He may have been coaxed into saying more than he intended in the TV interview and got carried away, but this would rather underline the credibility of the evidence given [1]. He may have some grudge against the company and/or be about to lose his job but there is no evidence to suggest this [1].

Alternatively, not useful [1] because he may be exaggerating for dramatic effect [1] having been encouraged or even paid by the producer of the programme [1]. Also, we cannot be sure that all building firms are like his – there may be more responsible building firms in Taniga who do a good job in spite of the laxity of the regulations [1].

Award mark for judgement only if the judgement is supported.

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- (c) Suggest one piece of further information that would assist in deciding whether a holiday in Taniga.

Indicative content

Whether this is just a one-off rogue company/isolated incident.

Whether other companies do their own checks on the property even if government enforcement of regulations is rather lax.

Whether this laxity applied to other forms of holiday other than villas. Hotels, for instance, may be better regulated so this sort of holiday would be O.K.

Whether factors such as climate and cost outweighed the poor quality and regulation of the accommodation.

As regards the tropical storms, one might want to know how frequent these were and when they occurred.

Clear, valid answer – 2 marks. Vague/generic answer – 1 mark.

- (d) How likely is it that the managing director of Happy Holiday Homes could be shown to be responsible for the Smiths' bad holiday experience? Write a short, reasoned argument to support your conclusion, with critical reference to the evidence provided and with consideration of any plausible alternative scenarios. [6]

Level 3 5–6 marks	A strong answer, which provides a reasoned argument including thorough evaluation of the evidence to support an acceptable conclusion in terms of probability and evaluates the plausibility of at least one possible alternative scenario.
Level 2 3–4 marks	A reasonable answer, which evaluates the evidence, draws an acceptable conclusion in terms of probability and may mention at least one possible alternative scenario.
Level 1 1–2 marks	A weak answer, which refers to the evidence, possibly including a simple evaluative comment. The conclusion may be unstated or over-stated.
Level 0 0 marks	No credit-worthy material.

Indicative content

Unlikely: The main culprits appear to be the government of Taniga for poor enforcement of building regulations and the local rep for not doing her job properly. Mr Smith needs to bear some of the responsibility as he admits he didn't research the holiday very well and relied on a website with no other forms of contact other than an e-mail address. The managing director shows some concern about the after effects of the storm and asks his rep to check it out which she fails to do. He is also aware of the legal position and this suggests a degree of carefulness and responsibility.

Likely: He is ultimately responsible for the experience they have. Either he knows that the government of Taniga is lax in which case he is knowingly taking a risk or he doesn't which suggests he hasn't done his research very well. He is also responsible for staff training and making sure his reps are reliable – perhaps it is true that they are overworked and underpaid which is why his employee is of such doubtful quality. He should have assessed her

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qualifications and ability to check out the safety of buildings The lack of contact details on the website makes it look as if he is running a rather dodgy outfit. His e-mail to the reporter indicates that he knows he is taking risks with substandard property which is why he has asked her to check it out.

- 2 (a) **What can we conclude from the research in Source B about professional drivers' use of screenwashers? Explain your answer.** [3]

That they are unlikely to use screenwash additive [1]. If they did they would not be at greater risk from infection than ordinary drivers as the additive kills any bacteria [2].

1 mark for incomplete explanation (e.g. "they would not be at risk of infection"). 2 marks for complete explanation (i.e. both elements, that they would not be at risk because the additive kills the bacteria).

- (b) **Consider Source D. Suggest one explanation for why the use of these sprayers does not result in an increased risk of Legionnaires' disease.** [3]

Explanation 1: the water is changed more frequently than in the case of car screenwashers [1]. This would mean it did not lie around long enough for the bacteria to breed in sufficient numbers [2]. Credit should also be given if candidates offer an explanation of why screenwash water would be changed less frequently (larger containers/lack of use in dry weather).

1 mark if explanation is incomplete/unclear

Explanation 2: the water is kept in a cool place/homes do not replicate the degree of heat of a car engine [1]. If this is the case, one of the necessary conditions essential for the bacteria to replicate is missing [2].

1 mark if explanation is incomplete/unclear

Credit other reasonable explanations appropriately, e.g. exposure to sunlight kills the bacteria.

Credit 1 mark each for 2 weak/partial explanations.

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- (c) Given the evidence in Sources A and C, how reliable would it be to conclude that rain is at increased risk of catching Legionnaires' disease when walking in fine warm rain?

Not at all reliable to conclude this [1] because a key condition is not satisfied [1] i.e. the water in question is not stagnant [1] so the harmful bacteria would not have time to multiply [1].

However, it could disguise the genuine risk pointed out in Source C from infected steam as it would be difficult to distinguish between fine warm rain and such steam [2].

- (d) How likely is it that the incidence of Legionnaires' disease will reduce as a result of the findings of the research in Source B? Write a short, reasoned argument to support your conclusion, using and evaluating the information provided in Sources A – D. [6]

Level 3 5–6 marks	A strong, reasoned argument, which uses and evaluates all or most of the evidence provided.
Level 2 3–4 marks	A reasonable, simple argument, which uses and/or evaluates evidence.
Level 1 1–2 marks	A weak answer, which makes some reference to evidence but consists of opinion and/or assertion rather than argument or a weak argument, which makes no reference to evidence.
Level 0 0 marks	No credit-worthy material.

Indicative content

The research in Source B does highlight an important risk for professional drivers which can be easily avoided by putting an additive in screenwash water. This risk also applies to ordinary drivers who do not use screenwash additive. However, it assumes that professional drivers will be aware of and act upon this research – they may think additive is too expensive for instance. Also, the fact that professional drivers are five times more likely to catch the disease than ordinary drivers does not necessarily mean that large numbers are involved or that this is a significant or main source of Legionnaires' disease. Source C suggests that things like faulty air conditioning units cause much more serious outbreaks and the use of air conditioning may increase in the future due to global warming. The chances of faults/poor maintenance is likely to increase with this. Source A also suggests that the health and habits of the individual are also relevant in terms of susceptibility to the disease. The research in Source B would have no impact on factors such as age, poor diet and smoking. If any of these increase in the future then there may be an increase in outbreaks in legionnaires disease even if all drivers use additives in their screenwash and eliminate this particular risk. With an ageing population, this risk factor in particular seems likely to increase in the future.

Source D suggest that other sprayers used by individuals can be easily made safe through simple precautions like changing the water regularly. This reinforces the point that, whilst highlighting a potential risk, the research in Source B is not relevant to other more significant factors in the occurrence of Legionnaires' disease such as air-conditioning and the susceptibility of the individual.

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3 (a) Using the exact words from the passage as far as possible, identify conclusion.

2 marks: (However) gambling (should be regarded as no different from other leisure activities and) should not be singled out for special condemnation.

1 mark: Gambling should be regarded as no different from other leisure activities.

Any addition of a reason as well as the conclusion. Other additions are acceptable.

(b) Using the exact words from the passage as far as possible, identify three reasons used to support the main conclusion. [3]

- If we are to disapprove of gambling then we are in danger of condemning a large number of leisure pursuits (which are purely pleasurable and yield no long term gain).
- The amount of money spent on gambling is no greater than that spent on tobacco.
- Gambling does not cause heart disease and lung cancer.
- (However) no intake of a chemically addictive substance is involved.
- It is an unavoidable aspect of human existence.
- Gambling is essential for success.

- (c) Evaluate the reasoning in the argument. In your answer you should comment on the strengths, weaknesses, flaws and unstated assumptions.

Level 3 4–5 marks	Evaluation of strength of argument with critical reference to strength/weakness, including some of: flaws, support given by reasons to intermediate conclusions, use of evidence, inconsistency, analogies, assumptions.
Level 2 2–3 marks	Relevant extended counter-argument (3 marks). Specific counter-assertions/agreements (2 marks). Single point of evaluation only (2 or 3 marks).
Level 1 1 mark	Discussion of the topic without specific reference to the passage or general counter-assertion/agreement. or weak attempt at evaluation
Level 0 0 marks	No relevant comments. Summary/paraphrase of passage.

Indicative content

Assumptions

Para 2: Gamblers find the activity pleasurable – they might be addicted to something that no longer gives them pleasure.

Para 4: Addiction cannot be psychological/involve chemicals produced by the body.

Para 4: Assumes that golfing can not be an addiction.

Para 5: By implication, widespread/inevitable features of human existence should be accepted.

Flaws

Various examples of 'tu quoque' e.g. mindless consumption, tobacco, golf addiction.

Slippery slope in moving from gambling to risk and lack of progress.

Equivocation between gambling meaning a specific activity of betting money on outcomes and 'gambling' used as a synonym for risk taking.

It is not at all clear that risk taking is a necessary condition for success in all aspects of human achievement.

Para 5: Appeal to popularity.

Other points about the reasoning

The author fails to address the aspects of gambling that are most dubious and distinguish it from other leisure activities. Even if some consumption is a 'waste of money', transactions are involved and one does get a product in return for the money expended, whereas the nature of gambling means it is unlikely that there will be any return on one's expenditure. Also, the hope that 'one more time' will prove successful means that the gambler can be drawn into a spiral of decline in which they end up losing far more than intended. This would not apply to, for instance, restaurant meals.

There may be links between gambling and smoking/there may be other diseases associated with gambling.

As the reference to 'adrenalin rush' in the final paragraph suggests, it may be that gambling encourages the release of chemicals in the brain and that the individual then becomes addicted to these internally produced chemicals. Focussing on only those chemicals that are ingested is too narrow when considering addiction.

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As discussed under assumptions, this reasoning can only work if one accepts that the widespread and universal is somehow insulated from disapproval. Candidates could give a number of counter examples here e.g. obesity, death.

The final paragraph rather moves away from the conclusion and suggests that we should positively approve of gambling as opposed to simply not condemning it. As discussed under flaws, this only works if one uses the expression 'gambling' equivocally.

(d) 'Children should be encouraged to take risks.'

Write your own argument to support or challenge this claim. The conclusion of your argument must be stated. [5]

Level 3 4–5 marks	Developed, coherent argument. Reasons strongly support conclusion. Development may include intermediate conclusion or apt examples. Simply structured argument 4 marks. Effective use of IC & c 5 marks.
Level 2 2–3 marks	A simple argument. One reason + conclusion 2 marks. Two or more separate reasons + conclusion 3 marks.
Level 1 1 mark	Some relevant comment.
Level 0 0 marks	No relevant comment.

Maximum 3 marks if conclusion is implied but not stated.

Maximum 3 marks if argued to wrong conclusion.

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Example argument for:

R1 – Many aspects of life involve having the confidence to take risks

R2/Ex – This confidence can only be built up through taking risks from an early age through activities such as rock climbing

R3 – A child who has not had these learning opportunities will lack the confidence to take risks

IC – Such children will not be fully equipped to tackle life successfully

MC – Children should be encouraged to take risks

Example argument against:

R1/Ex – Children are naturally reckless and don't appreciate the risks involved in activities such as climbing and cycling

R2 – Many children are injured or die as a result of this inability to appreciate risk

IC – Adults have a duty to protect children from the consequences of such risk-taking

MC – Children should not be encouraged to take risks