



**ADVANCED GCE**  
**CRITICAL THINKING**  
 Unit 4: Critical Reasoning

**F494**

Candidates answer on the Answer Booklet

**OCR Supplied Materials:**

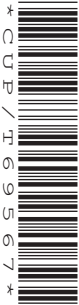
- 8 page Answer Booklet
- Answer Sheet
- Resource Booklet

**Other Materials Required:**

None

**Tuesday 20 January 2009**  
**Morning**

**Duration:** 1 hour 45 minutes



**INSTRUCTIONS TO CANDIDATES**

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the spaces provided on the Answer Booklet.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Section A contains multiple-choice questions which you should answer on the Answer Sheet provided.
- Do **not** write in the bar codes.

**INFORMATION FOR CANDIDATES**

- The number of marks is given in brackets [ ] at the end of each question or part question.
- You should spend no more than 40 minutes answering Section A.
- You will be awarded marks for the quality of your written communication in Section B.
- The total number of marks for this paper is **110**.
- This document consists of **12** pages. Any blank pages are indicated.

### Section A: Multiple Choice

Answer **all** questions in this section of the paper.

You are advised to spend no more than 40 minutes on this section of the paper.

**1** Which of the following is an argument?

- A** Car alarms, horns, sirens, radios, road works, planes and people shouting – these noises pose a significant threat to our health. Noise causes an accumulation of stress hormones which can lead to a heart attack.
- B** Honey bees in Europe and the Americas are disappearing. This may sound trivial but it is not. It is potentially disastrous. Honey bees pollinate the plants which provide our food.
- C** The Food Dudes are TV superheroes who aim to persuade children to eat their greens by portraying eating vegetables as cool. Trials in 150 Irish primary schools indicate that after six episodes most children are eating and even enjoying vegetables.
- D** The Yangtze river dolphin is now probably extinct. There are only 150 Gulf of Mexico porpoises left. They are likely to die in shrimping nets. [1]

**2** Zoo keepers at the Nuremberg zoo decided not to intervene when a polar bear at the zoo neglected her three cubs. In the end, the mother ate her cubs. Although they have been accused of cruelty, this is an unfair charge. The keepers made the right decision. In nature, things do go wrong. We should accept the natural course of events. Furthermore, when keepers at another German zoo hand reared the polar bear cub Knut there were great concerns about the effects of this intervention on the adult polar bear and its interactions with humans.

Which of the following is a principle used to support the reasoning in this argument?

- A** In nature, things do go wrong.
- B** It is unfair to accuse the zoo keepers of cruelty.
- C** The keepers made the right decision.
- D** We should accept the natural course of events. [1]

**3** Which of the following would best counter the argument?

- A** Adult polar bears are ferocious beasts far removed from the cuddly image we have of them.
- B** It is unethical to keep wild animals, especially arctic animals such as polar bears, in captivity in European zoos.
- C** It is unreasonable to define cruelty as allowing nature to take its course; we must understand cruelty as active.
- D** Keeping polar bears in a European zoo is already a significant intervention in the natural course of events. [1]

- 4 Mean spending on gaming machines in Australian gambling venues dropped 14% month on month following the introduction of a smoking ban in these venues.

Which of the following would **not** explain how a ban on smoking could cause this drop in spending on gaming machines?

- A People are increasingly gambling online rather than visiting gambling venues.
- B People spend less because they have to take breaks from gambling to go outside and smoke.
- C People who go outside to smoke may reflect on their losses and go home earlier than if had not taken a break.
- D People who used to visit gambling venues now choose not to because they wish to smoke.

[1]

- 5 The reason why Strictly Come Dancing is successful television is precisely that the celebrities' performance and behaviour are so amateur. We love to see celebrities showing themselves to be human and fallible, behaving like slightly drunk relatives at a lively family get together. But we watch the programme not just to laugh at the antics of half-familiar people in embarrassing costumes. The celebrities are learning a new skill – dancing. Many of them are not very good, but they do get better. So the programme gives us hope in a way that a polished, professional show cannot.

'So they give us hope in a way that a polished, professional show cannot.'

What is the function of this element in the structure of the argument?

- A Assumption.
- B Intermediate conclusion.
- C Main conclusion.
- D Reason.

[1]

- 6 'We love to see celebrities showing themselves to be human and fallible.'

What is the function of this element in the structure of the argument?

- A Assumption.
- B Intermediate conclusion.
- C Main conclusion.
- D Reason.

[1]

7

## Alcohol abuse kills 43% of Russian men

An astonishing 43% of deaths of Russian men between 25 and 54 are due to alcohol abuse according to research by an international group of scientists published in the Lancet today. The study said that the country's men, who have a life expectancy of only 59, die in excessive numbers not just because they drink lots of vodka but because they consume products such as eau de cologne and antiseptics which contain 95% alcohol by volume.

Extract from S. Bosely & L. Harding, *Cologne and antiseptic: Russia's killer drinks*, 15 June 2007  
© Guardian News & Media Ltd 2007

Which of the following best expresses a reason why the headline does not follow from the evidence in the passage?

- A It appeals to the authority of a single study.
- B It contains a sweeping generalisation about Russian men.
- C It generalises from men in a particular age group to all men.
- D Men can't die in excessive numbers, they can only die too young. [1]

8 Which of the following is a valid argument?

- A All students own mobile phones. You are not a student. You cannot own a mobile phone.
- B All students own mobile phones. You own a mobile phone. You must be a student.
- C Only students own mobile phones. You are not a student. You cannot own a mobile phone.
- D Only students own mobile phones. You do not own a mobile phone. You cannot be a student. [1]

- 9 People have too little time. Jobs, homes and families impose demands that are difficult to manage. If the job is demanding, ordinary stress may tip into clinical depression – head chefs and construction workers under pressure to complete a job on time are six times more likely to suffer serious depression or anxiety, according to researchers. These jobs are stressful because failure leads to public humiliation, deadlines are pressing, the work is physically hard in an uncomfortable environment, and there is often little encouragement or support. However, before condemning high-stress modern lifestyles, we should consider the alternative. Deadlines can bring excitement as well as fear. Unpredictability means variety and wards off boredom. Having too much to do is better than having too little. Unemployment is a scourge whose victims suffer far more than those in work – and are prey to drug-taking and crime. The loss of work, through redundancy or retirement, may trigger a worse reaction than the stress of doing it.

Extract from J. Laurance, *High-stress jobs 'double chances of depression'*, 02 August 2007  
© The Independent

Which of the following is the main conclusion of the passage?

- A Before condemning high stress modern lifestyles, we should consider the alternative.
- B If the job is demanding, ordinary stress may tip into clinical depression.
- C People have too little time.
- D The loss of work, through redundancy or retirement, may trigger a worse reaction than the stress of doing it. [1]

- 10 'Head chefs and construction workers under pressure to complete a job on time are six times more likely to suffer serious depression or anxiety.'

What is the function of this element in the structure of the reasoning?

- A Evidence to support the claim that stressful jobs can lead to depression.
- B Evidence to support the theory that deadlines, public humiliation and poor working conditions are stressful.
- C Reason why being a head chef or construction worker is stressful.
- D Reason why jobs impose demands that are hard to manage. [1]

- 11 Which of the following best expresses a flaw in the reasoning?

- A It confuses the necessity of some stress in our lives with stress being sufficient.
- B It generalises from just two high-pressure jobs to the whole of our modern lifestyle.
- C It restricts the options to highly stressful jobs or under employment.
- D It unfairly attacks the unemployed rather than considering their arguments. [1]

- 12** 60% of graduates in the US and UK are female. 80% of consumer decisions in the US, including about cars, computers and financial products, are made by women. The UK and Japan are not far behind.

Of the top 500 American companies, those with three or more women on the board perform significantly better than those with no women. For example, they achieve an 83% higher return on equity than those with minimal female representation.

Employers recruit equal numbers of men and women but only 20% of women are promoted into leadership roles, and there are only 3 female chief executives in Britain's leading companies.

One multinational company was concerned that only 5% of applications in Europe came from women. Its recruitment advertising showed a young businessman with dark suit and briefcase and the text spoke of the need for aggression, dynamism and competitiveness. When the company changed its advertising to show pictures of its own senior women and speak of enthusiasm, innovation and audacity, 40% of applications came from women.

Extract from A. Wittenberg-Cox & A. Maitland, *Why women in business became the solution, not the problem*, 05 February 2008 © Guardian News & Media Ltd 2008

Which of the following can reliably be concluded from the evidence above?

- A** Women are fairly represented in the highest leadership positions but companies ought to nurture more potential female leaders.
- B** Women are significantly underrepresented in the highest leadership positions, but companies would be well advised to nurture more potential female leaders.
- C** Women can be attracted into big business leadership by suitable advertising, but it is questionable whether this is a beneficial strategy for business leaders.
- D** Women have not only achieved equality with men but have outstripped men, so companies should put more effort into nurturing potential male leaders. **[1]**

- 13** It is commonly thought that people are reaching puberty earlier than they used to as a result of modern diet and standards of living. Evidence suggests that girls today reach puberty at about eleven or twelve, and boys at about fourteen, whereas a hundred years ago, around 1900, girls reached puberty between fourteen and sixteen years of age. However, during the Middle Ages, around AD 1000–1500, church law specified that young women could consent to marriage at twelve, and boys at fourteen. We can therefore conclude that the age of puberty was unusually high a hundred years ago rather than being unusually low now.

Which of the following is an assumption underlying the argument?

- A** Church law reflected the age of onset of puberty in the Middle Ages.
- B** Girls of twelve are suitably mature to consent to marriage.
- C** Living standards are not in fact related to the age of onset of puberty.
- D** People in the Middle Ages had high standards of living and diet.

[1]

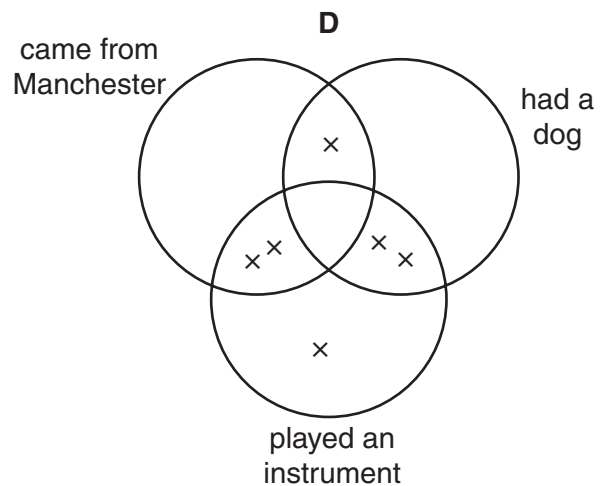
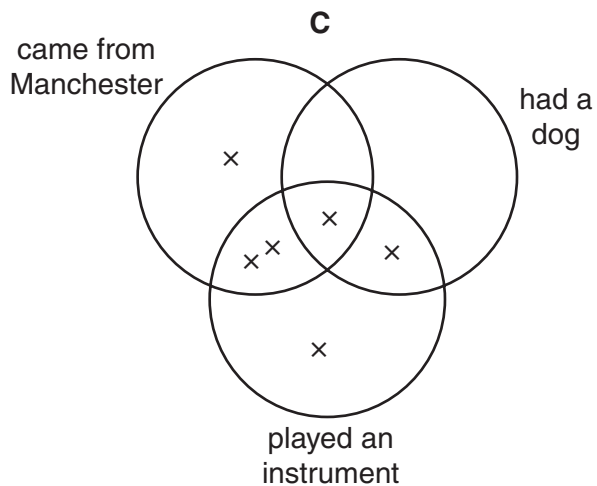
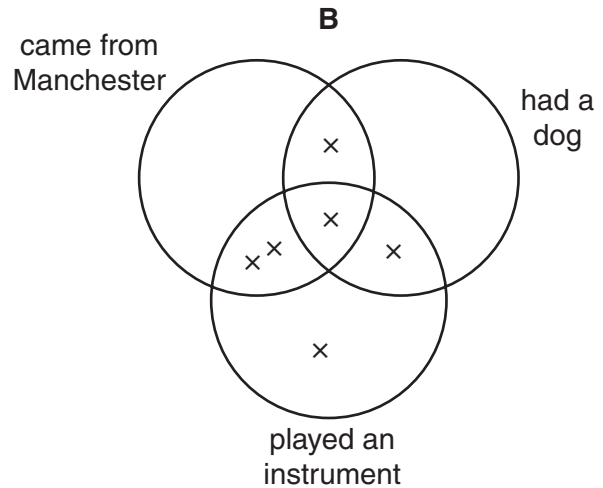
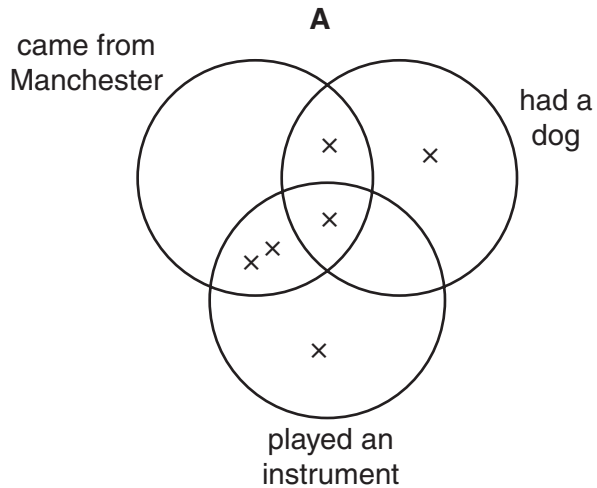
- 14** Which of the following best expresses a flaw in the argument?

- A** A general conclusion about the age of onset of puberty is drawn from insufficient evidence.
- B** High standards of living may be sufficient to lower the age of onset of puberty but this does not mean that they are necessary.
- C** Just because the age of onset of puberty has been low in the past does not mean that it will continue to be low.
- D** There may be options other than unusually high or unusually low onset of puberty.

[1]

- 15** Six of us who study Business Enterprise at Manchester Metropolitan University were talking about our childhoods. Four of us came from Manchester. Two of us came from Blackpool and one of those was a girl. Only the three girls had a dog. Five of us played an instrument. Two of us from Manchester played the saxophone and the two from Blackpool played guitar. No one played the saxophone and had a dog.

Which of the following diagrams best represents the information about the five friends?



[1]

- 16** Which of the following can be concluded from the information in Q15?

- A** Both of the girls from Manchester could play an instrument.
- B** Neither of the girls from Manchester could play the guitar.
- C** One of the girls from Manchester must play an instrument.
- D** One of the girls from Manchester must play the guitar.

[1]



- 17** Classical musicians should play from memory without relying on sheet music. It seems unreasonable that these ‘trained’ musicians should rely on sheet music whilst ‘untrained’ rock musicians play for two hours from memory. Furthermore, classical musicians would perform better if they memorised the music. One reason for this is that musicians in small groups, such as string quartets, would be able to communicate better with each other if they could see each other, and would therefore play better. In order to commit a piece of music to memory musicians would have to develop a deep understanding of its shape, structure and meaning. They will therefore be able to communicate this deep understanding of the music to the audience only if they memorise it.

Which of the following is the main conclusion of the argument?

- A** Classical musicians should play from memory without relying on sheet music.
- B** Classical musicians would be able to communicate better with each other if they could see each other.
- C** Classical musicians would perform better if they memorised the music.
- D** They will be able to communicate this deep understanding of the music to the audience only if they memorise it. **[1]**

- 18** Which of the following best expresses a flaw in the argument?

- A** Classical musicians communicate best with each other when they are listening to each other rather than looking at each other.
- B** It generalises from the complexities of rock music to the complexities of classical music.
- C** It is unfairly attacking rock musicians for being untrained rather than considering their skill as musicians.
- D** Memorising a piece of music may require deep understanding of it. It doesn’t follow that communicating deep understanding of music requires memorisation. **[1]**

- 19** Western countries should take action to prevent the rapid increase in China's carbon emissions. China's economy is growing extremely quickly, and increases in pollution accompany this economic growth. Air pollution in Beijing is so bad that people are advised to exercise in their homes rather than go outside. In 2006 alone China's emissions grew by 8%, around 450 million tonnes, an increase around the size of the UK's entire annual carbon emission. Continuing increases like this will inevitably speed up global warming, so there is clearly a need for action.

Which of the following is an assumption underlying the argument?

- A** China has no right to develop its economy as western countries have developed their economies.
- B** China's emissions are likely to become greater than emissions from western countries in the near future.
- C** Only western countries are in a position to make a significant difference to China's emissions.
- D** Western countries have the right and duty to take action to prevent further increase in China's emissions. **[1]**

- 20** A young Chinese woman read the argument and said:

'China makes most of the goods and presents bought in the developed world. People in Europe and America want more, so China makes more. They close factories in Europe and America because they don't want the pollution and move them to China. These people are happy to buy the cheap goods China produces. So they should not blame us for the pollution here.'

This can best be described as:

- A** Countering the argument by addressing an inconsistency in Europe and America's reasoning.
- B** Failing to counter the argument because it uses Europe and America's wrong actions to justify China's wrong actions.
- C** Weakening the argument by showing that it would be hypocritical of western countries to take action against Chinese pollution.
- D** Strengthening the argument by indicating how western countries could effectively take action to minimise Chinese pollution. **[1]**

## Section B: Analysing and evaluating argument

Read the article by Germaine Greer, and answer questions 21 to 24.

### Analyse

- 21** Name and briefly explain the function of the following elements in the structure of Greer's argument about graffiti:
- (a) 'In England two young men known in art as Krek and Mers ... have been sent to prison for 12 months and 15 months respectively.' (paragraph 4) [2]
  - (b) 'Graffiti cost Londoners £100m a year, and the country as a whole more than a billion, we are told.' (paragraph 5) [2]
  - (c) 'Whether at Lascaux 17,000 years ago or in Western Arnhem Land 50,000 years ago art began on a wall.' (paragraph 7) [2]
- 22** Analyse in detail the structure of the reasoning in paragraph 6 by identifying reasons, intermediate conclusions etc. and showing their relationship to each other. [11]

### Evaluate

- 23** 'We might as well stop washing graffiti off walls.' (paragraph 6)
- Evaluate the support given to this claim by the reasoning in paragraphs 3, 4, 5, 6 and 7. [30]
- You may support your evaluation by **selectively** referring to:
- Flaws in the reasoning **and** their impact on the strength of the reasoning.
  - Assumptions which must be made **and** their impact on the reasoning.
  - The effectiveness of the use of evidence and examples.
  - How effectively reasons support intermediate conclusions.

### Develop your own reasoning

- 24** There should be funding for more art in schools.
- Write your own argument to support or challenge this claim. [18]

**Total marks for Section B [65] marks**



*Copyright Acknowledgements:*

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- Q.9 Extract from J. Laurance, *High-stress jobs 'double chances of depression'*, 02 August 2007 © The Independent, [www.independent.co.uk](http://www.independent.co.uk)
- Q.12 Extract from A. Wittenberg-Cox & A. Maitland, *Why women in business became the solution, not the problem*, 05 February 2008 © Guardian News & Media Ltd 2008, [www.guardian.co.uk](http://www.guardian.co.uk)

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