

Thursday 18 June 2015 – Morning

LEVEL 2 AWARD THINKING AND REASONING SKILLS

B901/01 Unit 1 Thinking and Reasoning Skills

Candidates answer on the Question Paper.

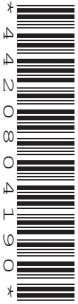
OCR supplied materials:

None

Other materials required:

None

Duration: 1 hour



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- 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.
- The total number of marks for this paper is **60**.
- Quality of Written Communication will be assessed in questions 7 and 8.
- This document consists of **16** pages. Any blank pages are indicated.

SECTION A

You are advised to spend no longer than 30 minutes on this Section.

It is worth 30 marks.

Answer all the questions in this Section.

1 Consider the argument in the box below:

Buying a lottery ticket is gambling. In the UK, you are supposed to be 18 to gamble. Therefore, the legal age for buying a lottery ticket must be raised from 16 to 18.

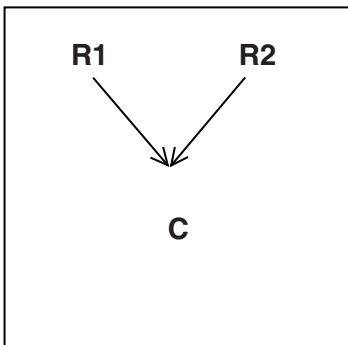
(a) Mark up the above argument as follows:

(i) Underline the conclusion. [1]

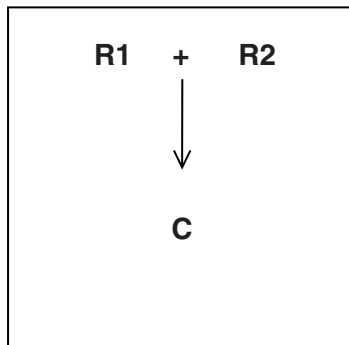
(ii) Circle **one** conclusion indicator word. [1]

(b) When asked to provide an argument map for the above argument three students provided the following maps:

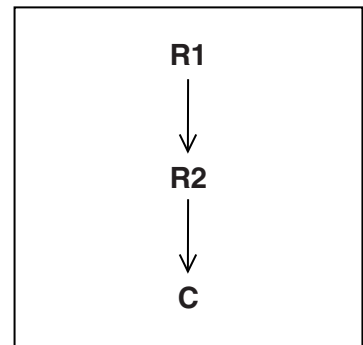
Map A



Map B



Map C



(i) Circle the correct map. [1]

(ii) Explain why this is the right answer.

.....

.....

..... [1]

(c) The argument above presents only one possible alternative to keeping the legal age for buying a lottery ticket at 16.

Identify **one** other option that the government could take.

.....

..... [1]

(d) Identify **two** criteria which would be helpful for the government to consider when deciding between the options.

Criterion 1

Criterion 2

[2]

(e) 'The government should raise the legal age for buying a lottery ticket to 18.'

(i) Give a reason of your own to support this claim.

.....

..... [1]

(ii) Give a reason of your own to challenge this claim.

.....

..... [1]

(f) The following definition of gambling has been suggested:

'A gambler is someone who spends money trying to win more money.'

(i) Tick the correct statement in the table below.

[1]

Buying a lottery ticket is:	Tick
a necessary condition for being a gambler.	
a sufficient condition for being a gambler.	
neither a necessary nor a sufficient condition for being a gambler.	
both a necessary and a sufficient condition for being a gambler.	

(ii) Explain your choice.

.....

..... [1]

2 Four employees of a company, Amy, Bas, Charlie and Devante, have parked their cars next to each other in the car park. Each car is a different colour: black, orange, silver and white.

Use the information provided to answer the questions below. You can use the matrix to help you.

- Bas parked his car next to the silver car.
- Devante owns the orange car.
- The black car is between Amy’s car and the silver car.
- Orange cars are least likely to be involved in accidents because they stand out most from their surroundings.

	Black	Orange	Silver	White
Amy				
Bas				
Charlie				
Devante				

(a) The colour of Amy’s car is
 [1]

(b) The colour of Bas’s car is
 [1]

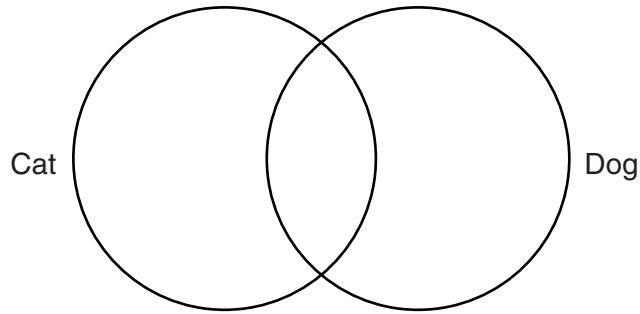
(c) The colour of Charlie’s car is
 [1]

(d) Their boss concluded that Devante’s car is the one least likely to be damaged.
 Explain why this conclusion cannot be reliably drawn.

 [1]

- 3 There is a street of 40 homes: 12 have a cat, 17 have a dog, and 5 of these homes have both a cat and a dog.

Complete the Venn Diagram and answer the questions below.



- (a) How many homes only have a cat? [1]
- (b) How many homes only have a dog? [1]
- (c) How many homes have neither a cat nor a dog? [1]
- (d) 'There is a home in the street that has a pet. It is not a cat therefore it must be a dog.'

Identify and explain the flaw in this reasoning.

.....

.....

.....

..... [2]

4 The following complaint letter from a patient was received by a doctor’s surgery.

Dear Doctor

I want to complain about the fact that I had to wait 50 minutes to be seen today. Three people who arrived after me were seen within 10 minutes. You would not expect people to push in front of you in a supermarket queue. This is not fair and should be sorted out.

If you keep making people wait then they will stop coming to see the doctor, more people will get ill and we will end up with a major outbreak of disease.

Yours sincerely

Mr Jones

(a) Mr Jones compares patients being seen before him to people pushing in front of others in the queue at a supermarket. What is the name given to this type of comparison?

..... [1]

(b) Identify and explain the flaw in the second paragraph of Mr Jones’s letter.

.....
.....
.....
..... [2]

(c) Mr Jones claims that he was not treated fairly.

An example below has been given to clarify why it might have been fair for him to have waited 50 minutes.

Example: the three other patients were being seen by the nurse.

Give **two** other examples.

1
.....
2
.....

[2]

- 5 The reception staff at the doctor’s surgery conducted a survey. This was to investigate complaints that the doctor was not spending enough time with some patients.

The survey was completed during one morning in March. The results are in the table below.

Patient	Length of time spent with the doctor	Nature of the appointment	Patient age	Called for an appointment
Mrs P	More than 10 minutes	Cold or flu virus	36	At 8.15am
Mr Q	5–10 minutes	Cold or flu virus	Teenager	At 8.30am
Ms R	5–10 minutes	Cold or flu virus	Teenager	At 8am
Mr S	More than 10 minutes	Injections for going on holiday	39	The day before
Mr T	More than 10 minutes	Cold or flu virus	32	At 9am
Miss U	5–10 minutes	Injections for going on holiday	Teenager	Two weeks before

- (a) Identify **two** patterns in the results of the survey.

Pattern 1

Pattern 2

[2]

- (b) Identify **three** weaknesses in the survey.

Weakness 1

.....

Weakness 2

.....

Weakness 3

.....

[3]

SECTION B

You are advised to spend no more than 30 minutes on this Section.

It is worth 30 marks.

Answer all the questions in this Section.

Read the following documents carefully before attempting to answer the questions:

Document A: Background Information

There is growing concern over climate change. One suggested cause of climate change is the burning of fossil fuels to generate electricity. Alternatives to fossil fuels are renewable sources such as solar and wind energy. The government has set a target to provide 15% of the UK's electricity through renewable sources by 2020.

It has been suggested that wind turbines are a good way to produce electricity for the UK. There has been much debate about where they should be placed. For example, they could be placed at sea, in cities or in the countryside.

**Document B: View of a London City councillor**

I love the idea of wind turbines, just not in big cities. The noise from wind turbines has been blamed for health problems including stress and difficulty sleeping. Large towns and cities already have many problems with pollution. They do not deserve to have wind turbines adding noise pollution.

Document C: View of a Royal Air Force pilot

I am concerned that wind turbines at sea could interfere with my plane's radar system. Wind turbines on land also affect aircraft training, especially when the aircraft need to fly low. Therefore, wind turbines should only be placed in big cities.

Document D: View of an environmental scientist

Bats are killed by wind turbines. The reduced air pressure behind a wind turbine blade is damaging to bats' lungs and hearts. Wind turbines should be located in areas where there are not significant numbers of bats. Ideally, the best location would be in towns and cities.

Document E: View of the owner of Cliff Top Views Hotel

The strength of the wind here at the cliff top varies from zero to storm force. This means that wind turbines placed here will not produce the same amount of electricity all the time. Also, I will not enjoy looking at these ugly structures outside my hotel. Guests prefer looking at the sea, which is one of the reasons they stay here. We have never had wind turbines before, so we do not need them now.

6 (a) In Document E, the hotel owner says:

We have never had wind turbines before, so we do not need them now.

Explain why this is an irrelevant appeal.

.....

..... [1]

(b) The following argument is put forward in Document C.

I am concerned that wind turbines at sea could interfere with my plane’s radar system. Wind turbines on land also affect aircraft training, especially when the aircraft need to fly low. Therefore, wind turbines should only be placed in big cities.

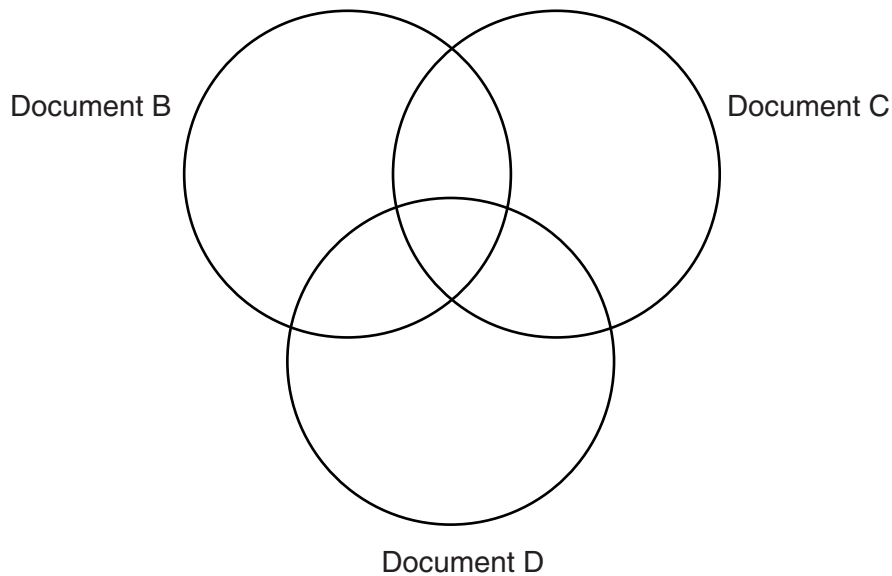
(i) Underline the conclusion of this argument. [1]

(ii) Identify **one** assumption in this argument.

.....

..... [1]

(c) The table below gives a list of statements 1 to 5. Place the number for each statement in the appropriate area of the Venn Diagram to show which document(s) would be consistent with each statement.



1	Wind turbines are a good idea.
2	Wind turbines are bad for wildlife.
3	Wind turbines cause problems.
4	Wind turbines create a lot of noise.
5	Wind turbines should be placed in cities.

[5]

(d) Explain how the criterion of expertise strengthens the credibility of Document D.

.....
.....
.....
..... [2]

(e) Explain how the criterion of vested interest weakens the credibility of Document E.

.....
.....
.....
..... [2]

(f) 'The credibility of the London City councillor in Document B is strong because he has access to data about the impact of wind turbines in towns and cities.'

Circle the criterion that has been used to make this judgement.

vested interest reputation ability to see [1]

(g) 'The credibility of the pilot in Document C is weak because he is bound to side with his trainees rather than the existence of wind turbines.'

Circle the criterion that has been used to make this judgement.

expertise bias ability to see [1]

7 There is a proposal to place a wind turbine near your home.

Write a letter to your local council to argue either for or against this proposal.

Your argument should include:

- a precise conclusion
- which is clearly supported by reasons
- with relevant evidence and/or examples.

In developing your argument you may use ideas and materials from the documents.

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ADDITIONAL ANSWER SPACE

If additional answer space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margins.

This section of the page is a large, empty area of lined paper. It consists of approximately 25 horizontal dotted lines spaced evenly down the page. A solid vertical line runs down the left side of this area, creating a margin. This is intended for students to write their answers to questions that require more space than the previous page.

A writing template consisting of a vertical solid line on the left side, creating a margin, and a series of horizontal dotted lines extending across the page for writing.

A series of 24 horizontal dotted lines for writing, with a solid vertical line on the left side.

A large area of the page is reserved for writing, featuring a vertical solid line on the left side and horizontal dotted lines extending across the page.



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