

Section A

Study the evidence and then answer questions 1 and 2.

Source A

On-line encyclopaedia

Dowsing, also known as water divining, is a technique for finding underground sources of water with the aid of a Y-shaped stick or rod. Those who have this ability hold the stick so that the base of the Y points forward, and if it moves downwards, water is believed to be present.



Some scientists believe that dowsers subconsciously recognise environmental clues to the presence of water and this causes bodily responses: this is known as the 'ideomotor effect'.

Source B

News report

Following a report that an engineer from a UK water company had been seen using dowsing rods to locate a broken water main, the veteran broadcaster John Humphrys interviewed Richard Wiseman for a current affairs programme on the BBC. Wiseman is Professor of the Public Understanding of Psychology at the University of Hertfordshire and specialises in challenging claims about the paranormal. He stated there was no scientific evidence for water divining, and that apparent successes of the method were due to coincidence.

John Humphrys then recounted that he had once asked a dowser to find water after the well had run dry on a small farm he owned, and "he found a wonderful supply." A few months later, when a contractor accidentally cut the pipe from the new well, Humphrys himself located the cut pipe by dowsing with a bent coat hanger. Humphrys asked, "So is it completely inconceivable that there might be something to do with the movement of water under the earth and it sends some sort of signal, magnetic or whatever, through your nerves or something?"

Prof Wiseman responded: "It's a great example of you saying 'OK, I did this thing and something surprising happened.' The question would be, how many people did that thing and something surprising didn't happen, they didn't find any water? They're not going to be on the radio saying 'It was amazing'."

Source C

Research report

A team of researchers conducted tests to investigate dowsing. All of them had previously stated that they thought dowsing was probably genuine. Tests were held in a specially adapted barn, in which water flowed through a movable pipe, hidden under the floor. 104 people who claimed to be dowsers were each asked to locate the position of the pipe 10 times; the pipe was moved to a different position each time. The researchers claimed that 3 of the 104 people showed a high level of success.

Source D

Website of national geological institute

Water dowsers operate mostly in rural locations, where residents need to find the best and cheapest supply of groundwater. Drilling and developing a well can cost over a thousand dollars, so homeowners are understandably reluctant to run the risk of drilling a well which turns out to be dry. They therefore often ask dowsers for help.

There is a simple natural explanation for what appears to be successful water dowsing. In many areas, water is so widespread and close to the surface of the land that it would be hard to drill a well without finding some water. However, accurately locating a usable supply of water requires specialist knowledge of hydrology, geology and geophysics, in order to discover the depth and extent of the different water-bearing strata and the quantity and quality of water found in each.

- 1 (a) Is Source A an argument? Justify your answer. [2]
- (b) With reference to Source B, identify one factor that increases and one factor that reduces the reliability of
- (i) John Humphrys. [2]
- (ii) Professor Richard Wiseman. [2]
- (c) The researchers in Source C claimed their results showed that some people do have the ability to locate water by dowsing.
- (i) Suggest an **alternative** explanation for the results. [2]
- (ii) Suggest a piece of further evidence which would strengthen the researchers' claim. [2]
- (d) How useful is Source D? [4]
- 2 *You are advised to spend some time planning your answer before you begin to write it.*
- 'Dowsing is a genuine skill.'
- To what extent do you agree with this claim? Write a short, reasoned argument to support your conclusion, using and evaluating the evidence provided. [8]

Section B

Read the following passage and then answer questions 3, 4 and 5.

- 1 There are various opinions about the age at which young people should become eligible to vote to choose a government, but everyone agrees that there should be such an age. There should also be a maximum age for voting. Many people towards the end of their life lose their memory and their ability to think clearly. Since they are evidently incapable of voting in a rational manner, they should not be allowed to vote. Voting should be restricted to those who are capable of thinking through issues clearly and responsibly.
- 2 The moral basis for democracy is that the people who are going to be affected by the policies followed by a government should be the ones who choose that government. The younger generation will have to live with the consequences of the decisions that are made today, and so they alone should make those decisions. These consequences could include higher or lower taxes, and an enhanced or reduced standard of living.
- 3 Anyone who has spent much time with their grandparents knows that old people enjoy talking about the past. Rapid social change has made them less confident about life in the present and the future. Yet elections are all about choosing between alternative futures. People who have chosen to live in the past should play no part in making such choices.
- 4 The slogan 'No taxation without representation' means that the people who contribute to the cost of running a country deserve to have a voice in deciding how their money will be spent. Pensioners may have made such contributions in the past, but they are doing so no longer. They are now dependent on the efforts and kindness of others and therefore no longer deserve to be involved in political decision-making.
- 5 Old people are more rigid in their thinking than young people. Typically, they formed their political convictions long ago and are unlikely to change them in response to new conditions and ideas. So their votes will be based on prejudice rather than on engagement with current issues and debates.

- 3 (a) Using the exact words from the passage as far as possible, identify the *main conclusion*. [2]
- (b) Using the exact words from the passage as far as possible, identify **three** *intermediate conclusions*. [6]
- (c) Identify the argument element and explain the function of the following words from paragraph 2:
- ‘higher or lower taxes’ [2]
- (d) Identify an *unstated assumption* required by the argument in paragraph 5. [2]
- 4 (a) Explain why the reasoning in paragraph 1 gives only limited support to the argument as a whole. [2]
- (b) Identify **two** flaws of *conflation* in paragraph 3 and explain to what extent each weakens the reasoning. [4]
- (c) Identify and explain **one** flaw or weakness in the reasoning in paragraph 4. [2]
- 5 *You are advised to spend some time planning your answer before you begin to write it.*

‘Elderly people are an important part of society.’

Write your own short argument to support **or** challenge this claim. The conclusion of your argument must be stated. Credit will not be given for repeating ideas from the passage. [8]

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