

## ENGLISH LANGUAGE PAPER 1

### PART B2

#### Reading Passages

8:30 am – 10:00 am (1½ hours)  
(for both Parts A and B)

#### GENERAL INSTRUCTIONS

- (1) Refer to the General Instructions on Page 1 of the Reading Passages booklet for Part A.

#### INSTRUCTIONS FOR PART B2

- (1) The Question-Answer Book for Part B2 is inserted in this Reading Passages booklet.
- (2) Candidates who choose Part B2 should attempt all questions in this part. Each question carries ONE mark unless otherwise stated.
- (3) Hand in only ONE Question-Answer Book for Part B, either B1 or B2, and fasten it with the Question-Answer Book for Part A using the green tag provided.

Not to be taken away before the  
end of the examination session

## PART B2

Read Text 5 and answer questions 43-62 in the Question-Answer Book for Part B2.

### Text 5

#### Bad Science

1 [1] In his seminal book 'Bad Science', physician and science writer Ben Goldacre uncovers some of the flaws in science and medicine that have led to widespread misconceptions. From the techniques employed by advertisers and the media, he shows how little veracious scientific evidence there is to be found in their seemingly boldacious claims. Goldacre's book, catering to the general reader, shows us the need to be critical of what we read.

5 [2] Below is the introduction excerpted from the book.

[3] Let me tell you how bad things have become. Children are being routinely taught in thousands of British schools that if they wiggle their head up and down it will increase blood flow to the brain, thus improving concentration; that rubbing their fingers together in a special 'sciencey' way will improve energy flow through the body, and that holding water on their tongue will hydrate the brain directly through the roof of the mouth, all as part of a special exercise 10 programme called Brain Gym. We will devote some time to these beliefs and, more importantly, the fools in our education system who endorse them.

[4] But this book is not a collection of trivial absurdities. It follows a natural development from the foolishness of 'experts', via the credence they are given in the mainstream media, through the tricks of the £30 billion food supplements industry, the evils of the £300 billion pharmaceutical industry, the tragedy of science reporting, and on 15 to the poor understanding of statistics and evidence that pervades our society.

[5] Today, scientists and doctors find themselves outnumbered and outgunned by vast armies of individuals who feel entitled to pass judgement on matters of evidence, an admirable aspiration, without troubling themselves to obtain a basic understanding of the issues.

[6] At school, you were taught about chemicals in test tubes, equations to describe motion, and maybe something on 20 photosynthesis, but in all likelihood you were taught nothing about death, risk, statistics, and the science of what will kill or cure you. The hole in our culture is gaping: evidence-based medicine, the ultimate applied science, contains some of the cleverest ideas from the past two centuries. It has saved millions of lives, but there has never once been a single exhibit on the subject in London's Science Museum.

[7] This is not for a lack of interest. We are obsessed with health – half of all science stories in the media are 25 medical – and are repeatedly bombarded with sciencey-sounding claims and stories. But as you will see, we get our information from the very people who have repeatedly demonstrated themselves to be incapable of reading, interpreting and bearing reliable witness to the scientific evidence.

[8] Before we get started, let me map out the territory.

[9] Firstly, we will look at what it means to do an experiment, to see the final results with your own eyes, and judge 30 whether they fit with a given theory, or whether an alternative is more compelling. You may find going through these steps childish and patronising. The examples we look at are certainly absurd but they have all been promoted credulously and with great authority in the mainstream media. We will look at the attraction of sciencey-sounding stories about our bodies, and the confusion they can cause.

[10] Interestingly our next focus is homeopathy, which Wikipedia declares as a pseudo-science that 'works'. We 35 will look at this not because it's important or dangerous – it's not – but because it is the perfect model for teaching evidence-based medicine and how we can be misled into thinking that any intervention is more effective than it really is.

[11] Then we will move onto bigger fish. Some alternative therapists claim to be nutritionists and have somehow managed to brand themselves as men and women of science. Their errors are interesting because they have a grain of science to them, and that makes them not only more interesting, but also more dangerous, because the real threat is not that their customers might die (there is the odd case) but that they systematically undermine the public's understanding of the very nature of evidence.

[12] We will see the rhetorical slights of hand and amateurish errors that have led to you being repeatedly misled about food and nutrition. This new industry acts as a distraction from the genuine lifestyle risk factors for ill health, as well as its more subtle and alarming impact on the way we see ourselves and our bodies. This arises from the widespread move to medicalise social and political problems, to conceive of them in a reductionist, biomedical framework, and push commodifiable solutions, particularly in the form of pills and faddish diets. I will show you evidence that a vanguard of startling wrongness is entering British universities, alongside genuine academic research into nutrition. In the field of medicine, we see similar tricks used by the pharmaceutical industry to pull the wool over the eyes of doctors and patients.

[13] Next, we will examine how the media promote the public misunderstanding of science, their single-minded passion for pointless non-stories, and their basic misunderstandings of statistics and evidence, which illustrate the very core of why we do science: to prevent ourselves from being misled by our own atomised experiences and prejudices. Finally, in the part of the book I find most worrying, we will see how people in positions of great power, who should know better, still commit basic errors, with grave consequences, and we will see how the media's cynical distortion of evidence in two specific health scares reached dangerous and frankly grotesque extremes. It's your job to notice, as we go, how incredibly prevalent this stuff is, but also, to think what you might do about it.

[14] You cannot reason people out of positions they didn't reason themselves into. But by the end of this book you'll have the tools to win – or at least understand – any argument you choose to initiate, whether it's on miracle cures, the evils of big pharma, the likelihood of a given vegetable preventing cancer, and more. You'll have seen the evidence behind some very popular deceptions, but along the way you'll also have picked up everything useful there is to know about research, levels of evidence, bias, statistics, the history of science and anti-science movements, as well as falling over just some of the amazing stories that the natural sciences can tell us about the world along the way.

[15] It won't be even slightly difficult, because this is the only science lesson where I can guarantee that the people making the stupid mistakes won't be you. And if, by the end, you reckon you might still disagree with me, then I offer you this: you'll still be wrong, but you'll be wrong with a lot more style and flair than you could possibly manage right now.

#### END OF READING PASSAGE

Sources of materials used in this paper will be acknowledged in the *HKDSE Question Papers* booklet published by the Hong Kong Examinations and Assessment Authority at a later stage.

Candidate Number

Please stick the barcode label here.

**HKDSE 2024  
ENGLISH LANGUAGE  
PAPER 1 PART B2  
QUESTION-ANSWER BOOK**

**B2**  
**DIFFICULT SECTION**

Write your Candidate Number and stick a barcode label in the space provided on this page.

Read Text 5 and answer questions 43-62. (42 marks)

**Text 5**

43. Using the information from paragraph 1, complete the table below.

(4 marks)

<b>Bad Science by Ben Goldacre</b>	
Author's background	Doctor and science writer
Target audience	(i) _____
<b>Summary</b>	
Goldacre identifies problems with science and medicine: (ii) _____ _____	The desired outcome: (iv) _____ _____
problems with advertising and the media: (iii) _____ _____	

44. What does the phrase ‘in a special “sciencey” way’ (line 8) tell us about Goldacre’s attitude towards the Brain Gym programme?

\_\_\_\_\_

45. (i) What do ‘these beliefs’ (line 10) refer to? \_\_\_\_\_ (1 mark)

(ii) What has contributed to the spread of ‘these beliefs’ (line 10)? \_\_\_\_\_

(1 mark)

46. According to paragraph 4, why might the mainstream media and the general public be held responsible for the current situation? (2 marks)

(i) mainstream media: \_\_\_\_\_

(ii) the general public: \_\_\_\_\_

Answers written in the margin will not be marked.



47. In paragraph 5 what does the metaphor 'outnumbered and outgunned' (line 16) tell us about the situation with scientists and doctors?

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48. Complete the summary of paragraphs 6 and 7 using a word or phrase taken from the paragraphs for each gap.

It is said that the public is (i) \_\_\_\_\_ about their physical well-being. This is reflected in the fact that 50% of all science news items are to do with (ii) \_\_\_\_\_ and people are constantly exposed to (iii) \_\_\_\_\_.

Medicine that is driven by evidence is the (iv) \_\_\_\_\_ form of applied science as it has saved millions of lives. However, the problem is that there is a huge (v) \_\_\_\_\_ in society when it comes to understanding science-based medicine. The difficulty exists because it is likely that those who (vi) \_\_\_\_\_ at school probably did not convey to you such information.

49. What does 'the territory' (line 28) refer to? \_\_\_\_\_

50. Which phrase does Goldacre use in paragraph 11 to refer to 'alternative therapists'? \_\_\_\_\_

51. Complete the table by finding an example from paragraphs 6-11 for each of the following. (5 marks)

	Example from the text
A. An important concept that is not sufficiently taught	(i) _____
B. A positive outcome	(ii) _____
C. An unreliable source of information	(iii) _____
D. An example of pseudo-science	(iv) _____
E. A fatal outcome	(v) _____

52. What makes the errors 'more dangerous' (line 40)?

- A. It is possible that some clients might die.
- B. The public's understanding of evidence is eroded.
- C. Alternative therapists brand themselves as nutritionists.
- D. Alternative therapists claim to be men and women of science.

A      B      C      D  
           

53. Find an expression in paragraph 12 that can be replaced by 'deceive'.  


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54. What has contributed to the popularity of 'commodifiable solutions' (line 47)?  


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55. Below is a summary of paragraph 13. In five of the lines, there is ONE mistake. If you find a mistake, underline it and replace the word with one that expresses the correct idea in the Correction column. Both grammar and spelling must be correct. In one of the lines, there is no mistake; put a tick (✓) in the Correction column. One has been done for you as an example. (5 marks)

Summary		Correction
Ben Goldacre has in his sights <u>three</u> important groups;		two (example)
those who reject great power and authority and those in the	(i)	
mainstream media. He considers the former more prevalent	(ii)	
as their pointless mistakes have serious outcomes. He believes the	(iii)	
latter doggedly support meaningful stories about science	(iv)	
with such a fundamental misconception of the facts.	(v)	

56. Why does Goldacre find 'people in positions of great power' (line 54) most worrying?  


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57. Provide an example of 'the tools to win – or at least understand – any argument' (line 59).  


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58. Which of the following best summarises the idea in the sentence, 'You cannot reason people out of positions they didn't reason themselves into.' (line 58)?

- People cannot be persuaded to change their point of view...
- A. by intuition; they need reason and logic.
  - B. when their point of view is based on logic.
  - C. when their point of view is not based on logic.
  - D. by logic alone; they need emotional intelligence.

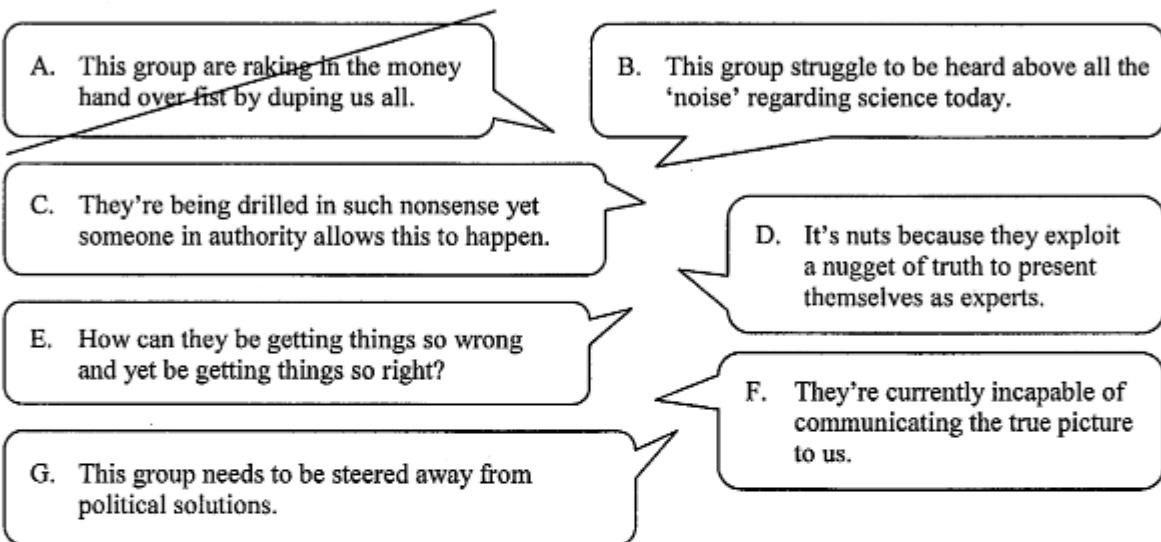
A      B      C      D  
           

Answers written in the margins will not be marked.

59. What is Goldacre referring to when he says 'along the way' (line 61)?
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60. What does Goldacre mean when he says 'you'll be wrong with a lot more style and flair' (line 67)?
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61. Below are some quotes from a radio interview given by Goldacre. Match the quotes with the groups of people he is talking about. Each letter can be used ONCE only. ONE comment is not used. ONE has been done for you as an example. (5 marks)



Groups of people in the text		Letter
The food supplements industry		A (example)
British children	(i)	
The media	(ii)	
Some alternative therapists	(iii)	
Scientists and doctors	(iv)	
British universities	(v)	

62. Is Goldacre optimistic or pessimistic about the future regarding science and medicine? Use evidence from Text 5 to support your answer.
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**END OF PART B2**