

# BioMedical Admissions Test (BMAT)

## Section 3: Writing Task

### BMAT Example Essays

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## Example Essay Answers

### Higher Grade - 5A

The statement suggests that truth is the ultimate goal of the scientist, and the objective nature of science makes the core value of the scientist to be striving to reveal this truth. This disregards the means by which it is achieved, and even its consequences, giving an almost consequentialist approach.

Perhaps the strongest argument against this is the fact that a scientist, as a member of society, should be limited by the same morals and values as the rest of the population. That is, not causing intentional harm to other members of the society. A scientist is not justified in experimenting on people with certain characteristics without their consent, or with procedures that will cause them harm. From a more utilitarian viewpoint, it could be argued that the moral obligation of a scientist is to reveal truth that is applicable and useful to society, so the moral obligation extends to the societal benefit.

This potential benefit cannot be disregarded. Therefore, to some extent a scientist is not limited by the same constraints as a layperson, since the truth that they are attempting to reveal is considered a priority for the overall benefit. For example, while animal cruelty is a punishable offence, if a scientist injects an animal with a virus in order to test the efficacy of certain medications, it is justifiable since the result of this experiment could help members of society with this virus. Nonetheless, even if the application to society is not obvious, this does not make the work 'pointless' from a societal viewpoint, as it could prove useful later on in the future. For example, quantum mechanics at first seemed an inapplicable field but later became the basis for several technologies such as the electron microscope.

In conclusion, the revealing of truth is viewed as an honourable and morally correct cause, and is generally regarded as the driver of scientific work. However, this is not to the extent that it surpasses the morals shared by society; a scientist's duty is to be a good citizen primarily, and being a good scientist is secondary to this. Therefore, truth is not the only moral obligation, but it can in some cases be used to justify actions of scientists that may otherwise be viewed as immoral.

### Essay Plan

- Introduction - explain reasoning
  - Revealing the truth is more important than the way it is done, "the end justifies the means".
- Arguments against
  - Scientists are bound by the same morals as the rest of society.
  - **Example:** No justification in experimenting on people without consent.
  - Utilitarianism - the revealed truth must be useful to society.



- Arguments for
  - Truth develops society, “greater good”.
  - **Example:** Scientists do not have same constraints e.g. animal testing.
  - To combat the utilitarianism point, previously inapplicable fields are now the basis for technologies.
- Conclusion - “to what extent”
  - Truth is the driver of scientific work.
  - **But** it should not surpass shared morals of society.
  - Truth is not the **only** moral obligation, but it can be used as justification.

### Marking Points

- Essay is written in a **formal** style, with **logical** presentation of arguments and conclusion.
- Essay addresses **all the cues** from the question and presents simple but effective arguments, with **relevant examples**.
- Conclusion addresses the **extent** to which the candidate agrees with the statement.
- Marks **could** be docked for not addressing the cues in the **order** given.
- This essay has been awarded a 5 for content. A key point to note here is that the difference between a score of 4 and 5 is the **breadth** of the points and how **compelling** the conclusion is. In other words, in order to achieve 5A, the points made need to be unique and interesting. An essay with more basic or similar points, but an excellent way of conveying them, will generally achieve 4A. Whilst this essay has been graded 5A, it is possible that it could be given 4A too, as it is up to the individual BMAT examiner to decide how good the points and conclusion are.

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### Higher Grade - 4A

A scientist’s job is to make factual discoveries by having a theory and then systematically gathering evidence to either prove or disprove it. Morality refers to whether an action is good or bad. Therefore the statement argues that the only good action required of a scientist is to educate the public on their discoveries regardless of whether it is good or bad, thereby telling the truth.

An example of this would be Charles Darwin publishing his findings on evolution, despite the expected negative reception to evidence that we are descended from apes rather than being children of God. The importance of revealing this information outweighed his consequential branding as a maverick.



However, if the statement is correct, then does this then mean that scientists have no other moral obligations? If that were the case, this would mean that scientists cannot be held accountable for any consequences after they have 'revealed the truth', an example being the thousands of deaths caused by their creation of the atomic bomb and other deadly inventions. Furthermore, this also implies that debate over other issues such as designer babies and human cloning could end, if scientists should only think about making more discoveries.

But should scientists then stop at the possibility of causing any possible future suffering with their findings and inventions? It is not scientists but other people who decide what to do with these 'truths' that could turn the discovery into either something right or wrong. For example, warfarin was invented by scientists as a blood thinner. But whether people use it as a medication or as rat poison is their own decision. If this is the case, then revealing the truth is a scientist's only moral duty.

In conclusion, one of the most important moral obligations is to deliver the truth, even when it may be difficult to face. To this extent the statement is somewhat true. Nonetheless, the statement is incorrect as this cannot be the only moral responsibility scientists can have, otherwise we could be living in a very different dystopia with human cloning factories to rid us of our organ shortage and widespread invention of very dangerous weapons.

### Essay Plan

- Introduction - explain reasoning
  - Explain what a scientist's job is and what morality means.
  - Describe that the statement says the one good action needed is to tell the truth by publishing all of their findings and educating the public.
  - Give a brief example such as Charles Darwin publishing his theory of evolution.
- Arguments against
  - Invention of the atomic bomb even though it will cause grievous harm.
  - No more debate over morality of designer babies and human cloning.
- Arguments for
  - It is not the scientist's decision as to how people use their discoveries, whether for good or for bad.
  - Example of warfarin as blood thinner or rat poison.
- Conclusion - "to what extent"
  - One of scientist's most important moral obligations is to tell the truth even when the findings are very controversial, so in a way it is true.
  - **However**, it cannot be the **only** moral obligation
  - Decision **against** the statement and explanation that the world we would be living in would be very different if they only had that one moral obligation.





### Marking Points

- Great **systematic** explanation of the statement.
- A wide range of points discussed **concisely**.
- Relevant examples given which **support** the points.
- **Fluent** language used throughout.
- Conclusion is somewhat extreme but could be considered relevant given the previously given examples.

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### Lower Grade - 2C

The statement suggests that the only thing a scientist needs to do as part of their profession is to show the world the truth. Truth means that which is in accordance with fact or reality.

I believe that this is not true. Even though a scientist tries to achieve a result that proves something, results which don't show the truth, but instead disprove something, can be just as valuable. Also, just because someone is a scientist, this doesn't mean that they are beyond the law, so they could not get away with criminal offences just because they are also trying to reveal the truth.

On the other hand, you could say that the whole point of science is to find out the truth, and this is the only thing that a scientist should do. If a scientist does not dedicate all of their efforts to this goal, the truth might not be found out and therefore the scientist has not achieved what they should do. For example, if they are spending time doing compulsory services (e.g. jury duty), they are losing time that they could spend on their research.

In conclusion, I believe that a scientist should strive to achieve the truth but not while being exempt from being criminal punishment.

### Essay Plan

- Results which don't show the truth can also be valuable.
- Scientists are not beyond the law.
- Scientists should only try to discover the truth - dedicate their time to it. Other obligations could take time away from this.

### Marking Points

This essay gained a score of 2 because:

- Candidate attempts to explain the statement, but **defines** it instead.
- Candidate loses strength of argument by inserting their **own explicit opinion** ("I believe...").
- Arguments are weak, perhaps due to superficial understanding of the statement. Candidate appears to argue whether the only obligation is to reveal the truth, rather than the only **moral** obligation. Points do not address the cues well.



- Candidate does attempt a conclusion to sum up the essay, and it could be considered to include the **extent** to which they agree with the statement, but the specific example of “criminal punishment” makes it lose strength.

This essay gained a C grade because:

- Candidate uses slightly **less formal language** (e.g. use of contraction “doesn’t”).
- Essay is not difficult to understand but the **sentence structure** is either fairly simple or awkwardly long as in the second paragraph.

**Exam Tip** - Having an organised essay plan is important, as it ensures you do not miss any parts of the question. Compared to the higher grade essay plan, this lower grade plan does not set out each part of the question clearly and does not split the points up into for/against.

A good way to make sure you include everything is to set out your essay plan as:

- Introduction - explain the statement
- Arguments in support of the statement
- Arguments contradicting the statement
- Conclusion - answer to what extent you agree with what the question asks

Nonetheless, as important as planning is, the relative length of the plan is up to you - some people benefit from having a detailed plan setting out almost everything, while others prefer to have briefer bullet points under the headings and letting the essay flow more naturally.

It is recommended that you start off with the former technique, but if you find that you are writing good essays with a less detailed plan, it is just as possible to successfully write the essay with the latter.

