AWARD WINNING COURSE

Master the

BMAT

Master BMAT Techniques

Practice BMAT Questions

MEDIC MIND

By Medic Mind

Contents

1:1 BMAT TUTORING

✓ **Delivered by BMAT experts, who scored in the top 10% of the exam**
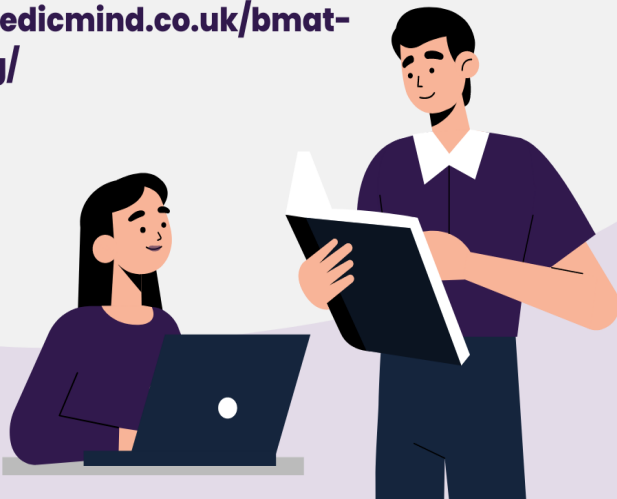
✓ **A personalised 1:1 approach, tailored to your unique needs**

✓ **Proven success, with Medic Mind students achieving an average score of 16.5A(top 10% nationally)**

Book your FREE consultation now

www.medicmind.co.uk/bmat-tutoring/

1

Introduction

The BioMedical Admissions Test (BMAT) is designed to test the academic potential of otherwise similarly accomplished candidates. The test assesses generic academic skills, basic scientific knowledge and written communication ability. Section 1 focuses on the generic academic skills to determine problem solving and critical thinking capacity. This part of the test requires candidates to work quickly and proficiently as this section is time pressured.

Timings and Questions

The statistics for this section are as follows:

- 60 minutes
- 32 Questions
- 1 minutes 52 seconds per question

Scoring in Section 1

Every question is worth 1 mark. There is no negative marking so it is important to answer every question. Total marks are then added up and converted into a standardised BMAT score. On average 5.0 is the median score amongst candidates while 6.0 is considered a good score - placing candidates in the top 10-15%.

For example, in 2020, the score conversion was as follows.

Section 1 score conversion

Total mark	BMAT score
0	1
1	1
2	1
3	1
4	1.3
5	1.6
6	1.9
7	2.2
8	2.5
9	2.7
10	2.9
11	3.1
12	3.3
13	3.5
14	3.7
15	3.9
16	4.1
17	4.3
18	4.5
19	4.6
20	4.8
21	5
22	5.2
23	5.4
24	5.7
25	5.9
26	6.2
27	6.5
28	6.8
29	7.3
30	7.9
31	8.8
32	9

The distribution of BMAT scores is released by the test administrators every year in the format of a histogram. The distribution of Section 1 BMAT scores in 2020 is showcased below. Oxford University advise that "that the typical average applicant should be working towards a 6 (a 7 is still fairly rare) in sections 1 or 2" whilst Imperial College London maintain a cut-off of 3.5 in Section 1 and Section 2, with the sum score in these two Sections being at least 10.9. UCL advise that the average candidate invited to interview scored 5.7 in 2021. BMAT score requirements change every admission cycle so candidates are advised to research the requirements of desired universities and set a score goal accordingly. As a general rule, higher BMAT scores are correlated with higher acceptance rates. However, there are many parts to a medicine application beyond BMAT score with each university weighting various parts of the application differently. Therefore, scoring lower than desired can be mitigated by strong performance in other areas.

The histogram below can help candidates set a target Section 1 score. The following chapters can help provide the necessary information and tips to help candidates prepare effectively, and work towards achieving this score.
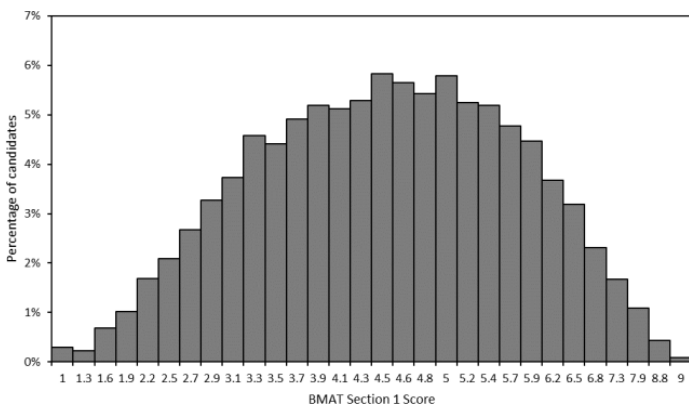
Question Composition

Below is an exploration of the different types of questions found in the BMAT Section 1. Understanding the skills being tested in each question format allows prospective candidates to hone in on these skills in their own practice.

Critical Thinking Questions

In critical thinking questions, a series of logical arguments are presented. Candidates are required to summarise and draw conclusions, identify assumptions, assess the impact of additional evidence, detect reasoning errors, match arguments and apply principles.

Candidates can expect to spend around 30 minutes on critical thinking questions with approximately 16 questions of this type present in the section. Candidates often find critical thinking questions difficult initially. However, honing in on certain foundational skills, as explored in the following chapters, can significantly improve speed and accuracy, helping increase the score achieved on the day.

Problem Solving Questions

In problem solving questions, candidates are required to efficiently encode and process numerical information to solve problems. They also must be able to recognize the relevant information, discern similar cases and apply the appropriate problem solving strategies where relevant. Typically this involves using simple numerical and algebraic operations to decipher the answer.

This type of question typically takes three formats.

Relevant Section - Candidates are required to filter through large amounts of information quickly and efficiently to identify the relevant details needed to answer the question.

Finding Procedures - Candidates are required to work out the correct mathematical procedure needed to effectively solve a given problem.

Identifying Similarities - These questions require candidates to compare information presented in two different ways, and identify the similarities. Information is typically presented in

graphs, tables and charts.

Candidates can expect to spend around 30 minutes on problem solving questions with approximately 16 of these questions present in Section 1. Problem solving questions can often take a long time to work out initially. Thus learning fast ways to approach these questions and honing these skills is essential to improving speed and accuracy and thus, securing a high mark in Section 1 of the BMAT. The following chapters will provide information and tips on how to improve these skills.

Scoring Highly on Section 1

Candidates often neglect Section 1 due to an inaccurate perception that Section 1 cannot be prepared for. In order to score highly on Section 1, it is recommended that candidates become familiar with the different types of questions asked. Identifying the different types of questions, and practising them individually, will help improve efficacy on the day. The following chapters provide a breakdown of question types and advice for approaching each individual type of question.

1:1 BMAT TUTORING

✓ **Delivered by BMAT experts, who scored in the top 10% of the exam**
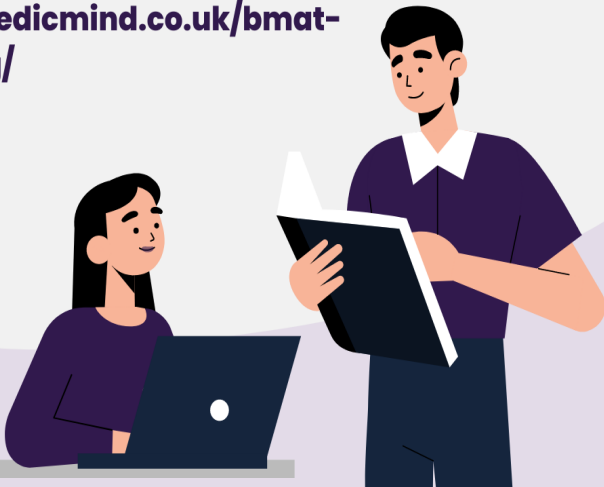
✓ **A personalised 1:1 approach, tailored to your unique needs**

✓ **Proven success, with Medic Mind students achieving an average score of 16.5A(top 10% nationally)**

Book your FREE consultation now

www.medicmind.co.uk/bmat-tutoring/

2

Conclusions

Conclusions fall within the *Critical Thinking* category of questions. This format will typically present a series of logical arguments and candidates will be required to draw conclusions based on the arguments presented. Although this may sound like an easy task, often, a number of arguments will be presented throughout the passage so identifying the main conclusion can prove difficult. Therefore, practising this type of question is important as it will aid candidates in identifying the key argument.

The Conclusion

A **conclusion** is a single line or phrase that summarises the whole passage. In the BMAT, candidates are asked to either summarise or draw a conclusion. Summarising requires candidates to *identify* the main conclusion based on the arguments provided. Drawing conclusions, on the other hand, requires candidates to

infer the main conclusion based on the information provided. The following example displays a passage and the corresponding conclusion.

> **Passage:** *'Global temperatures have been rising exponentially over the past 30 years, therefore it is clear that global warming is a real threat.'*
>
> **Conclusion:** *'It is clear global warming is a threat'*

Drawing conclusions is an important skill for future medics to have as doctors are often required to draw conclusions about a patient's condition based on all the information provided.

Answering the Question

In order to identify the main conclusion and answer the question correctly, it can be helpful to ask yourself the following five questions.

1. What is the main focus of the argument?
2. What is the author trying to convince me of?
3. If I read this one line would it summarise the whole passage?
4. Why has this been written?
5. What is the tone?

These questions will help identify the main conclusion and are

explored in depth below.

Cover Test

Before reading the answer options, candidates are advised to read the passage and formulate their own conclusion. Then read the answer options and find the corresponding answer - if there is a corresponding answer then this is a successful cover test and indicates that the candidate has likely found the correct conclusion.

Trigger Words

A number of 'trigger' words can help indicate the main conclusion of the argument including:

- Consequently
- Therefore
- So
- Hence
- Thus
- As
- It is very important
- The most pressing issue
- Most important of all
- It follows that

- This proves that
- The point I'm trying to make is
- The truth of the matter Is
- This shows that
- This indicates that
- To sum up

These words will typically, but not always, precede the main conclusion of the argument. Once the main conclusion has been identified, read the answer options to find the correct answer.

What is the main focus of the argument?

When approaching these questions, it is key to concentrate on the *main* focus of the argument. Have a go at the question below.

Example Question 1

> **Passage:** *"It is often suggested that self-esteem is a motivating*
>   *factor for using social media, and has been described as a*
>   *"social lubricant". Two scientists investigated Facebook use*
>   *of 63 students from a Northeastern university and found*

that

  participants who updated and viewed their own profiles during

  their experiment had enhanced self-esteem than those who

  did not. An explanation for this is that social media offers every

  user the ability to selectively self-present meaning one is able

  to display more positively biased aspects about them-selves

  and filter any negative content. It therefore enables users to

  build an ideal image of themselves online which then boosts

  their self-esteem - a construct known as identity shift."

Which one of the following best expresses the main conclusion of the above argument?

A - Social media can improve one's self-esteem

B - Social media offers every user the chance to have an alter-ego

C - Social media can make one happier

D - Social media leads to depression

E - Social media is investigated heavily in psychology

Explanation:

What is the main focus of the argument? Asking this question reveals that the main focus of the argument is the causal relationship between social media use and self-esteem. The entire passage focuses on the positive impact of social media on an individual's self-esteem.

Answer: A

What is the author trying to convince the reader of?

This question yields substantial utility when there are multiple arguments presented within the text or when both sides of the argument are discussed. It is important that candidates filter out minor arguments presented on either side of the debate and instead focus on the bigger picture. This will help reveal the author's overarching argument which will often act as the main conclusion.

Example Question 2:

> *Passage: "The Grenfell Tower fire occurred on 14 June 2017 at the 24 storey Grenfell Tower block of public housing flats in North Kensington, Royal Borough of Kensington and Chelsea, West London. It caused at least 80 deaths and over 70 injuries. The cladding in the building was thought to be one of the reasons the fire spread enormously quickly. The local council opted for a cheaper form which compromised on fire safety and was*

ultimately a key player in the spread of the fire. If there is not to be a repeat of Grenfell Tower, the government must reconsider its stance on fire safety. The fire is an unfortunate tragedy, as it could have been prevented by rigorous fire tests from governmental policy, dismissed as 'red tape'."

Which one of the following best expresses the main conclusion of the above argument?

A - The rigorous fire tests are a common example of red tape

B- The Grenfell Tower fire occurred in North Kensington

C - The government must think again about their policies on
   fires

D - The cladding at Grenfell caused the fire in the building

E - The government is more concerned about costs than safety

Explanation:

What is the author trying to convince me of? In this passage, the author is trying to convince the reader that the current fire safety

policies are dangerous and must be reconsidered. The author begins by highlighting the tragic consequences of the current regulations. The author then moves on to explain exactly how the regulations allowed fire safety to be comprised and led to the uncontrollable fire. Before stating that this tragedy could have been avoided by better government policies that mandated more rigorous fire testing. Critically the author states that 'the government must reconsider its stance on fire safety' in order to prevent another devastating fire. Thus the author is trying to convince readers that the current government policies on fire safety need reconsideration.

Answer A is false as we are told that they are dismissed as 'red tape', suggesting it should not be seen as being red tape, although it is and there is no indication that it is 'common'.

Answer B is mentioned in the text but remember we are looking for the main conclusion not one of the conclusions or premises.

Answer D is also true but is not what the passage is getting at.

Answer C is the main conclusion as the author is hinting at the fact that the government can play a role in preventing what happened at Grenfell.

Answer E is something that is slightly opinionated and it could be the case that the government is concerned more about safety than costs, as 'red tape' could be interpreted in many ways. The local council did opt for a cheaper form of cladding, however, it is unfair to extrapolate this to the entire government.

Answer: C

> Experts Advice!
>
> Looking for keywords or points mentioned the most
> number of times can help spot the main conclusion.

If I read this one line, would it summarise the whole passage?

This question is arguably the most helpful to confirm the correct answer has been chosen. If a single line summarises the whole passage then, often it is the main conclusion.

Example Question 3:

> **Passage**: 'If the Moon were in a perfectly circular orbit, a little closer to the Earth, and in the same orbital plane, there would be total solar eclipses every month. However, since the Moon's orbit is tilted at more than 5 degrees to the Earth's orbit around the Sun, its shadow usually misses Earth. The Moon's orbit must cross Earth's ecliptic plane in order for an eclipse (both solar as well as lunar) to occur. The truth of the matter is that solar eclipses are a rare phenomenon and should be appreciated accordingly. In addition, the Moon's actual orbit is elliptical, often

taking it far enough away from Earth that its apparent size is not large enough to block the Sun entirely.'

Which of the following could be drawn as a main conclusion from the argument?

A – The moon's orbit is large enough to block the Sun entirely.

B - The moon's actual orbit is elliptical.

C - Solar eclipses do not happen that often.

D - The moon's orbit is tilted at more than 5 degrees to the Earth's orbit around the Sun

E - The moon is a perfectly circular orbit

Explanation:

If I read this one line, would it summarise the whole passage? Reading the line **'**The truth of the matter is that solar eclipses are a rare phenomenon and should be appreciated accordingly.' does indeed summarise the whole passage. It also contains the trigger phrase 'the truth of the matter.' It corresponds with answer C therefore, C is correct. In this example, it can be seen that the whole passage can be summarised by this single line, therefore, this is the conclusion.

Answer: C

Common Trap

The conclusion is not always at the end of the
argument, it can be in the middle, beginning or the
end.

Why has this passage been written?

Analysing the purpose of the passage, and the intended end goal
is important. Focusing on the author's aim through writing the
passage can help illuminate the main conclusion, as typically
the focus or aim corresponds with the main conclusion.

Example Question 4:

> **Passage:** *"Speaking as a scientist, cherry picking evidence is*
> *unacceptable. When public figures abuse scientific argument,*
> *citing some studies but suppressing others, to justify policies*
> *that they want to implement for other reasons, it debases*
> *scientific culture.   One consequence of this sort of behaviour is*

that it leads ordinary people not to trust science, at a time when

scientific research and progress are more important than ever,

given the challenges we face as a human race. The huge

increase in the use of private agency staff, for example,

inevitably means that money is extracted from the system as

profit for the agency, and increases costs for the whole country.

We must prevent the establishment of a two-tier service, with

the best medicine for the wealthy and an inferior service for the

rest. International comparisons indicate that the most efficient

way to provide good healthcare is for services to be publicly

funded and publicly run. We see that the direction in the UK is

towards a US-style insurance system, run by the private

companies, and that is because the balance of power right

now is with the private companies."

Which one of the following best expresses the main conclusion of the above argument from Professor Stephen Hawking?

A - We should follow the US-style insurance system, run by private

companies.

B - There is far too much investment in the NHS

C - The government is not focused on making profit from the NHS

D - There is far too much controversy over the NHS

E - The public should be worried about the future of the NHS

Explanation:

Why has the passage been written? This is a long passage that contains multiple arguments therefore asking this question helps identify the main conclusion. Looking at the bigger picture, this passage is attempting to draw attention to the current risks facing the NHS including becoming a 'two-tier service' and 'a US-style insurance system'. Overall, the passage is relatively negative and critical about how the NHS is run and it is, therefore, clear that Professor Hawking is unhappy with how it is being run.

Answer: E

```
Common Trap
A passage can have several conclusions. Ensure you
```

```
find the main conclusion - the central focus of the
argument.
```

What is the tone? Is the author angry, happy, disappointed?

The tone of the author's writing can help shed light on the main conclusion. For example, if the tone is happy and optimistic this may suggest that the author agrees with the evidence provided, thus lending the conclusion that the author likely agrees with the main focus. On the other hand, if the author maintains a sceptical and negative tone this may suggest that they are not convinced of the evidence.

Example Question 5:

> *Passage: "There's an uninterrupted view of the city's dramatic sprawl of poverty from the road bridges that carry daily commuters between the islands and the mainland. Fishing and sand- dredging boats drift to work, heading deep into the lagoon. Many of the slums' wooden huts are on stilts, others are just basic shacks shoddily built on the unstable ground of trodden-down rubbish dumps. Most important of all, nobody knows exactly how many people live in Lagos, but they all agree on one thing; Nigeria's*

biggest city is growing at a terrifying rate. The UN says 14 million. The Lagos State government thinks it's nearer 21 million, as rural Nigerians are drawn by the hope of a better life to one of Africa's few mega-cities. By 2050 Nigeria will have twice the population it has today, more than half will live in cities, and about 60% of them will be under 21."

Which one of the following best expresses the main conclusion of the above passage?

A - Lagos' population is growing exponentially

B - Lagos is located in Nigeria

C - The population of Lagos is between 14 million to 21 million

D - There is a great deal of poverty in Lagos

E - The population of Lagos is very young

Explanation:

Answer B - This is true but is not the main conclusion from above.

Answer C - We cannot know this for sure, we just know that the

population is estimated differently by two different sources.

Answer D - This is again true but it is not the main conclusion of the argument above.

Answer E - We are told it will be very young by 2050 but not that it is young currently.

Pay attention to: "Most important of all, nobody knows exactly how many people live in Lagos, but they all agree on one thing; Nigeria's biggest city is growing at a **terrifying** rate."

What is the tone? The word 'terrifying' sets a tone of concern and accentuates that Lagos is growing very quickly. Additionally, the trigger words 'most important of all' also draw attention to this sentence.

Answer: A

```
Experts Advice!

Look for emotive words like 'terrying' or 'shameful'
in the passage as this can give insight into the tone
of the writing.
```

Choosing the answer

These five questions should help candidates to determine the correct answer to the question. However, if in doubt, it is recommended that candidates narrow down their choices by eliminating incorrect answers and then make an educated guess based on the remaining options. Practising this skill will help candidates improve in this component of the exam, thereby improving their final score.

Take-home points

1. **What is a conclusion?** A conclusion is a single line or phrase that summarises the whole passage
2. **Spotting Triggers.** Look out for trigger words that signal the conclusion.
3. **The BMAT CT "Cover Test"** Read the passage and decide on its conclusion *before* reading the answer options.

1:1 BMAT TUTORING

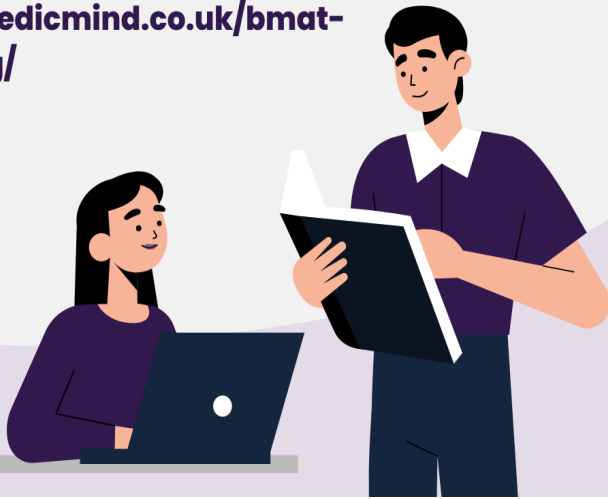✓ **Delivered by BMAT experts, who scored in the top 10% of the exam**

✓ **A personalised 1:1 approach, tailored to your unique needs**

✓ **Proven success, with Medic Mind students achieving an average score of 16.5A(top 10% nationally)**

Book your FREE consultation now

www.medicmind.co.uk/bmat-tutoring/

3

Assumptions

Assumptions fall under the *Critical Thinking* category of questions. This format will present a series of logical arguments and candidates will be required to identify the assumption made. Unaddressed assumptions in medicine can lead to insufficient investigation and obstruct efficient diagnosis. Therefore, the ability to identify assumptions and critically evaluate arguments is an important skill for future medics to have.

What is an assumption?

An **assumption** is an unexamined belief and unstated reason used to support the conclusion of an argument. Therefore an assumption is a statement that is taken at face value to be correct or definitive without any evidence to support it. Within the BMAT, the assumption cannot be stated within the passage and must hold true for the conclusion to be reached. Thus the aim is to identify a belief that is vital to the argument but unstated

within the passage.

The assumption must

1. Be vital to the argument and conclusion.
2. Not be stated or evidenced within the passage.

The golden rule of assumptions states that:

Premise + Assumption = Conclusion

For example:

> **Passage:** *"Manchester United has invested a significant amount of money in the transfer market. They now have a good chance of winning the Premier League this season."*
>
> **Assumption:** *"Investing in the transfer market leads to a higher chance of winning the Premier League"*

Example Question 1:

> *Passage: "In the United States, cigarette smoking is responsible for an*
>   *astonishing 480,000 deaths per year. In addition to this, 90% of*
>   *lung cancer deaths are related to cigarette smoking.*

The

   increasing publicity of these stats in recent years has led to an

   apparent shift. We have seen the number of cigarette smokers

   in recent years falling. Less and less people are deciding to take

   up this once fashionable pass time."

Which of the following is an underlying assumption?

A - *Cigarette smoking damages the Alveoli of the lungs*

B - *The health damage from cigarette smoking can't be*
   reversed

C - *People are keen to avoid health problems associated with*
   smoking

D - *People are keen to avoid health problems associated with*
   smoking

E - *The majority of people who get lung cancer can cite cigarette*
   smoking as a cause.

Explanation:

In line with the Golden Rule of Assumptions, candidates must deduce the premises and conclusion. In this example, the premises are firstly, that smoking leads to health problems and secondly, that people are becoming more aware of the health problems from smoking. The passage then goes on to conclude that less people are smoking.

Therefore, to spot the assumption it is important to identify the information that bridges the premises and conclusion. Why does an increased knowledge of the health risks of smoking lead to less people smoking? Assumption: People are keen to avoid the health problems associated with smoking.

Here it can be seen that the Premise + Assumption = Conclusion

Answer: C

How to spot an assumption

Candidates are encouraged to ask the two following questions to aid in spotting an assumption.

1. What needs to be true for this argument to hold?
2. What external knowledge am I using to draw this conclusion?

Example Question 2:

Passage: England cricket's Alastair Cook has been rated as the best
England batsman to ever play the game. He was once captain
of the side, but is enjoying the best form of his career now that
he is no longer captain of the side. Analysts of the game use
number of career runs scored as an indicator of how successful
the career of any batsman in the game has been.

Which of the following is an underlying assumption?

A - Alastair Cook has more runs than any other English batsman.

B - Alastair Cook is no longer captain of the England team

C - Alastair Cook disliked being the England Captain

D - Alastair Cook is a successful batsman

Explanations:

Options B and D can be ruled out as they are explicitly stated in the passage. Let us consider option C. The passage says that Alastair Cook is playing very well now that he is no longer captain. However, this does not mean he disliked being England captain and so we cannot assume this. A drop in form does not mean that he did not like being captain, and the drop in form may not have been a result of the captaincy pressures. This leaves us with option A as the correct answer. It is correct because Alastair Cook is rated as the best England batsman, and the rating of a batsman is done with regards to 'number of career runs.' Therefore we can assume Alastair Cook has more runs than any other batsman.

Answer: A

```
Expert's Advice!

Common Sense is Key! Sometimes, you have to strip an
argument down to its basics and take away any
external knowledge. External knowledge of a passage
can confuse candidates and cause them to infer
information that is not directly supported by the
passage. Always pick the answer most supported by the
information provided.
```

The Negative Test

Employing the negative test can help candidates confirm that they have selected the correct answer. To perform the negative test candidates must choose an answer option and place "it is not true that" in front of it. Negating the potential assumption reveals whether this damages the argument or overall conclusion. If it does damage the argument then it can be deduced that this assumption is vital to support the argument. Therefore, performing the negative test can help confirm the correct assumption. Below is a sample to help demonstrate the use and impact of the negative test.

Passage: Learning a foreign language helps people improve their social skills so we should learn them.

Answer Options:
1. Improving social skills is desirable
2. We should try to study all subjects that improve our social skills

When applying the negative test to the aforementioned options, we glean the following information.

*Learning a foreign language helps people improve their social skills. Improving social skills is **not** desirable. But we should learn foreign languages.*

This seriously damages the argument as why would an individual learn a foreign language that improves social skills if social skills are not desirable? Therefore this is the correct assumption.

*Learning a foreign language helps people improve their social skills. We **don't** have to try and learn all subjects that improve our social skills. But we should learn foreign languages.*

Similarly, this negative test does not damage the conclusion as a foreign language is one subject, not all subjects. Therefore, this is not the correct assumption.

Example Question 3:

Passage: "Research has shown that children who are the older siblings tend to earn much more than children who are the younger siblings. It is believed that it is unlikely to do with older siblings being more intelligent. Rather, it is believed to be more likely that to be an older sibling it requires a greater deal of independence and since higher paid jobs, such as investment banking and architecture, require independence skills, it is likely that they will enter these professions. This research did not measure whether the relationship between being the older sibling and earning more was dependent on their IQ. Younger siblings who had a career in show-business and journalism were in the top 10% of earners in the United Kingdom. This suggests that skills such as being independent exist at a greater proportion for older siblings than younger siblings."

Which of the following is an assumption underlying the above

argument?

> *A - Being independent is not essential for a career in medicine or architecture.*
>
> *B - Younger siblings are guaranteed to secure a job in professions involving show business and journalism.*
>
> *C - Younger siblings who have a career in show-business and journalism are unlikely to be intelligent.*
>
> *D - A high level of independent skills is not required for a job such as a news reporter or a celebrity*

Explanation:

Immediately answers B and C can be ruled out as they are not in the question. Next, we use the negative test.

> *A: Being independent **is** essential for a career in medicine or architecture.*

Older siblings tend to earn much more than children who are the younger siblings. Higher paid jobs such as investment banking and architecture require independence skills, it is likely that they will enter these professions. Being independent is essential for a career in medicine or architecture. This still makes sense therefore A is not an assumption.

*D: A high level of independent skills **is** required for a job such as a news reporter or a celebrity.*

Older siblings tend to earn much more than children who are the younger siblings. To be an older sibling requires a greater deal of independence. A high level of independent skills is required for a job such as a news reporter or a celebrity. Younger siblings who had a career in show business and journalism were in the top 10% of earners in the United Kingdom. This does not make sense, therefore D is an assumption.

Answer: D

```
Expert's Advice!

Elimination is key! Ruling out answers that are
obviously wrong first will allow more time to
investigate the remaining answer options. This will
save valuable time by helping you find the correct
answer more quickly.
```

Example Question 4:

Passage: *"Johann, the successful city banker, has grown accustomed to long working days and an overall hectic and stressful lifestyle. An urgent client meeting is hap-*

pening in his office tomorrow, which means his manager has requested Johann to arrive into the office by 7am. On hearing this news, Johann decided that he will wake up an hour earlier tomorrow morning."

Which of the following is an underlying assumption?

A - Johann enjoys working for his manager.

B - Johann exhibits high levels of stress.

C - Johann usually arrives into the office at 8am.

D - Johann usually arrives into the office at 6am.

Explanation:

Firstly, identify the conclusion of the passage, which is Johann must wake up an hour earlier tomorrow. The reason for this is that he has been requested to arrive at the office by 7am. We are not told the link between Johann deciding to wake up an hour earlier, and the instructions from his boss. We can only assume that the 7am arrival is an hour earlier than what he is accustomed to. Therefore C is the correct answer. Option A is incorrect as Johann could follow his manager's instructions begrudgingly, option B is incorrect as Johann's stress is explicitly stated in the passage, and option D is ruled out by following the aforementioned analysis that leads us to select option C.

Answer: C

Take-home points

1. **What an Assumption is.** An assumption is an unexamined belief and unstated reason used to support the conclusion of an argument.
2. **How to spot an assumption.** An assumption can be found by deducing the unstated information that is vital to the argument.
3. **Use the negative test**. Placing 'it is not true that' in front of an answer helps candidates identify the correct assumption.

1:1 BMAT TUTORING

✓ **Delivered by BMAT experts, who scored in the top 10% of the exam**
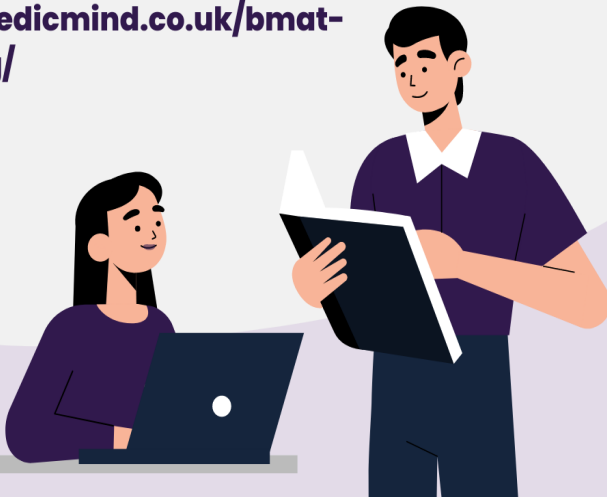
✓ **A personalised 1:1 approach, tailored to your unique needs**

✓ **Proven success, with Medic Mind students achieving an average score of 16.5A(top 10% nationally)**

Book your FREE consultation now

www.medicmind.co.uk/bmat-tutoring/

4

Flaws

Flaws fall under the *Critical Thinking* category of questions. This type of question will present a series of logical arguments and candidates will be required to identify the flaw in the argument. This type of question tends to be slightly easier than the other critical thinking questions as the flaw is often easier to spot.

What is a flaw?

A **flaw** is something that is questionable and is a reason that the argument would fall apart. Therefore, candidates are looking for a statement that is taken at face value to be correct, or definitive to occur, without any evidence. In order to spot this, when reading the passage it is important to consider the information or approach that prevents an argument from making sense. Often, the flaw is also an assumption. To aid students in identifying flaws in BMAT Section 1 passages, we have further explored the ten most commonly encountered types in the exam.

Ten Types of Flaws

1. The Straw Man

This type of flaw misrepresents or distorts an opposing view, with the purpose of dismissing it. This is achieved by exaggerating, fabricating or misrepresenting a person's argument. The aim of this approach is to present the opposing argument as less reasonable so that the argument given by the author appears more reasonable.

> ***Passage:*** *The school won't let us have a BMAT course without any teacher supervising. They're useless. They just don't want us to do well in the BMAT. We should write a petition.*

This passage demonstrates the Straw Man approach as the school's reasons for not allowing the BMAT course are being misrepresented to make it easier to dismiss them. Not enabling the course without any teacher supervision is to do with safeguarding, and is a valid reason for a course not to take place, which is very different from being "useless".

Example Question 1:

> ***Passage****: Donald Trump was inaugurated as the 45th President of The United States and one of his main policies was to withdraw from the Paris treaty to stop Global*

Warming. We are told a lot about how successful Donald Trump is as a businessman and that he therefore is able to make logical decisions and a good president. However I do not see how someone who doesn't care about the environment can be President of the United States.

Which of the following is a flaw in this argument?

A - The argument in believing Trump would make a good President is being misinterpreted as also being against climate change

B – Trump's decision to leave the Paris treaty is being misrepresented as him not caring for the environment.

C- They are attacking the people who believe that Donald Trump is a good president.

D – They are narrowing the options available for the reader

E - The argument represents a slippery slope where one action leads to a chain of reactions.

Answer: B

2. Ad Hominem

This flaw involves attacking the person presenting the argument

rather than the actual reasoning behind the given argument. This gives readers a negative view of the source of the other argument, thereby weakening it.

Passage: The government tells us that Brexit is going to be a success and that we will come out of it strongly, but how can we trust them, they don't pay taxes.

In this example, the government are being attacked but the arguments relating to the success of Brexit remain unaddressed. Instead, the focus of the attack is the source of the opinion, here, the government.

Example Question 2:

Passage: Andrew Sanders argues that men and women are paid equally in the BBC and that they care significantly about gender equality. Andrew Sanders would say that because he is male and one of the highest earners at the BBC. It can therefore be assumed that the BBC does not in fact care about equal pay.

Which of the following is a flaw in this argument?

A - The argument rejects the view that the BBC does not care about equal pay based on a remark about the person advancing the view.

B- It is a hasty generalisation

C - It is based on a lack of evidence

D – It believes that a link between two variables is necessarily causal

E - Andrew Sanders works for the BBC and therefore it is biased

Answer: A

3. Slippery Slope

The slippery slope flaw is premised on the assumption that if 'X' happens then 'Y' will happen and consequently, 'Z' will happen, therefore we should not let 'X' happen. This argument is flawed as it does not address the initial event. Additionally, this argument is often flawed because the stated series of events does not necessarily follow logically and lead to the stipulated consequence. There is often no guarantee that 'X' will lead to 'Y' and then 'Z'.

> **Passage:** *If we give more people places at medical school then it will mean that more people will apply and more people applying will mean that the application process will be easier and so will attract complacent applicants which will then make complacent medical students and complacent doctors.*

Giving more people places at medical school is unlikely to lead to negative consequences. The chain of events that is predicted is illogical and extreme.

Example Question 3:

Passage: The government should not make it illegal to buy cigarettes. Otherwise the government should also ban alcohol. This would mean junk food and foods high in fat content would also have to be regulated. We will then be forced to brush our teeth everyday and exercise more than we can.

Which of the following is a flaw in this argument?

A- It is suggesting that a minor action will lead to major and ludicrous consequences.

B - Multiple concepts are being brought together and are thought to be the same thing.

C - It is based on an assumption with a lack of evidence.

D - Brushing teeth and exercising more have positive health benefits.

Answer: A

4. Tu Quoque

This type of flaw occurs when an attempt is made to justify an action on the basis that someone else is doing it; it is colloquially thought of as the classic "if they're doing it, why can't we".

> *Passage: The United Kingdom should leave Paris Agreement that aims to tackle Climate Change because Donald Trump decided to and he is President of the United States*

In this case, it is not possible to justify leaving the Paris Agreement on the basis that another country has done it. It can be argued that it was illogical to do so and so another country's views may not necessarily reflect the UK's.

Example Question 4:

> *Passage: "Manchester United have hit their fans with a 12.3% average rise in season ticket prices for the next campaign. A top-price ticket will cost £38 and the cheapest £23… But United have defended the price rises, saying they compare favourably with the rest of the Premiership. 'We do not know what most of our rivals will charge next year, but even a price freeze across the rest of the Premiership would mean that next year only seven clubs will have a cheaper ticket than £23 and nine clubs will have a top price over £38 – in some cases almost double,' said Humby [Manchester United finance*

director]."

Source: http://news.bbc.co.uk/sport1/hi/football/teams/
m/
 man_utd/4895330.stm

Which of the following is a flaw in this argument?

A - It makes an assumption that they are not being unfair

B - They are drawing a conclusion that they are being unfairly targeted based on a lack of evidence

C -They are attacking the person disagreeing with the price rises

D – It is possible that all clubs, including Manchester United overcharge, for their tickets.

E - They are comparing a season ticket price in Football to the price of other sports

Answer: D

5. Generalisation

This type of flaw occurs when a statement attributes some characteristic to all, most, or some members of a given set. It is when one says something is true all of the time, for example,

when it is only the case some of the time.

> **Passage:** *We were having a discussion today at school, and we all have been using Instagram more than Snapchat and so Instagram is now the more popular social media*

There is not a large enough or representative sample size to ascertain whether this is the case. Whilst it may be true, a larger sample size may have revealed something different.

Example Question 5:

> **Passage***: It can be said that biologically, women are weaker. Due to the lack of testosterone in women, they are unable to undertake more of the strenuous jobs, such as heavy lifting. This imbalance of physical attributes is shown when in almost all of the sports worldwide, men and women compete in separate competitions.*

Which of the following is a flaw of the argument above?

> *A - Just because 'X' is 'Y' it does not mean 'B' is 'A'.*

> *B - It is ignoring the fact that there is a lot of bias against females in sport*

> *C – Sport doesn't fully represent the biological sta-*

tus/strength of the genders

D - Testosterone imbalance is not responsible for the differences in physical ability

Answer: C

6. Conflation

This flaw occurs when two statements share some characteristics with one another. Therefore, they are assumed to be a single identity, and the differences between these statements appear to become lost.

> **Passage:** *400 people got 70% average or above on the UKCAT but only 200 people got a 70% average for the BMAT, therefore the BMAT is the harder exam.*

Candidates are not given any indication of how many people in total took the UKCAT and the same for the BMAT, as there could have been fewer people taking the BMAT and so proportionally may not be the harder exam. We cannot accept the conclusion presented as it treats the sample size as the same.

Example Question 6:

> **Passage:** *There has been far too much discussion about*

the risks of binge drinking among under 21's. People are not listening to the facts. The number of deaths caused by binge drinking since 2009 adds up to a total of 37 however the number of deaths caused by taking selfies adds up to a total of 66. The amount of money invested in preventing binge drinking therefore has been a waste, as the comparison with taking selfies clearly shows that binge drinking is not as much of a dangerous risk as many people believe it to be.

Which of the following identify/identifies a weakness in the above argument?

A -More under 21's will carry out binge drinking if money was not invested in to preventing it.

B - The sample size was too small

C - There may be a smaller number of people who drink than those who take selfies.

D - We aren't given how much money was spent to decide it was a waste.

Answer: C

7. Circular Argument

This flaw occurs when a reason for an argument is the same

as the conclusion or you have to assume that the conclusion is correct for the reasons to make sense.

> **Passage:** *The bible is the Word of God because God tells us it is in the Bible.*

The only reason given for the Bible being the word of God is that it is from the Bible. However, candidates have to assume that the Bible is factual yet it is the very thing being questioned to follow the logic of the argument.

Example Question 7:

> **Passage:** *A group of campaigners were campaigning for the protection of animals on behalf of the WWF. They provided proof animals were dying out based on a few statistics they ran in the Amazon rainforest. They argue that endangered species should be protected as it is important to support animals that are threatened.*

Which of the following uses the same flawed logic as the argument above?

> *A - The law should be obeyed because it is the law.*

> *B- Books should not be printed because they cost a lot of money*

> *C- Coke has sugar and sugar can cause cancer so coke*

causes cancer

D- We should use solar panels because we're running out

Answer - A

8. Restricting the Options

This flaw occurs when a small number of choices are presented which helps to support one specific opinion.

> **Passage:** *Either we keep the risk of innocent school children being murdered in broad daylight or we accept that we need new gun laws.*

The only reason given for introducing legislation for gun licenses is that it is assumed it is the only possible solution to the risk of the murder of innocent school children and does not consider that there may be many others. It also appeals to the reader's emotions.

An Example Question 8:

> *Passage: Either a creator brought the universe into existence, or the universe came into existence out of nothing. The universe didn't come into existence out of nothing as nothing comes from nothing. This means that a creator brought the universe into existence.*

Which of the following uses the same flawed logic as the

argument above?

A -Every person who votes in the election votes for either Labour or Conservative

B – A legal case settled by Mike Ross is invalid because Mike Ross is a fraudulent lawyer.

C- Lincoln Burrows was put in jail and therefore he is a criminal

D - If you fail the BMAT, you won't make a good doctor

Answer: A

9. Causation vs Correlation

This flaw occurs when 'X' and 'Y' have both changed in a certain way, but could be completely unrelated. Just because 'B' follows a pattern with 'A', we should not wrongly assume that 'B' has caused 'A'.

Passage: Over time, the number of people smoking has risen as well as the number of people with cancer. Cancer therefore is caused by smoking.

This does not consider the fact that there may be other factors

which are causing cancer, and while there is a correlation between the two variables this could just be down to chance and is not necessarily causal.

Example Question 9:

> ***Passage****: Homeless population and crime rate might be correlated, in that both tend to be high or low in the same locations. It is equally valid to say that homeless population is correlated with crime rate, or crime rate is correlated with homeless population. To say that crime causes homelessness, or homeless populations cause crime are different statements.*

Why is the above statement true?

> *A - It is making a large generalisation*

> *B - It is restricting the options*

> *C - It is a circular argument*

> *D - Correlation does not mean causation*

Answer: D

10. Syllogism Flaws

This type of flaw occurs when a relationship exists between two variables in one direction. Therefore, it is assumed that it is also true for the two variables in the opposite direction or a third or fourth variable.

> **Passage:** *Some of A are B and some of B are C. Therefore some of A are C.*

There could be some B that are A but are not C. We need to question whether it is the same units of B that are A are also the same units that are C.

Example Question 10:

> **Passage:** *All spoons are cherries. Some cherries are apples. All spoons are apples.*

Which of the following conclusions are false?

> *A - Some spoons are cherries*

> *B - All cherries are spoons*

> *C - Some spoons are apples*

> *D - Some cherries are not apples*

Answer: B

Take-home points

1. **What is a flaw?** Something that stops the argument from making sense.
2. **10 types of flaws.** Practice spotting these common flaws
3. **Worked Examples:** Practice makes perfect!

1:1 BMAT TUTORING

✓ Delivered by BMAT experts, who scored in the top 10% of the exam

✓ A personalised 1:1 approach, tailored to your unique needs

✓ Proven success, with Medic Mind students achieving an average score of 16.5A(top 10% nationally)

Book your FREE consultation now

www.medicmind.co.uk/bmat-tutoring/