BMAT PRACTICE TEST
GENERAL INSTRUCTIONS

- You have 1 hour and 15 minutes to complete the Practice Test.
- Time each section strictly, so you can practise under test-like conditions.
- Answer the questions as quickly and accurately as possible.
- Pace yourself so you can attempt all the items in each section.
SECTION 1: APTITUDE AND SKILLS

TIME: 30 MINUTES

DIRECTIONS: Answer every question. Points are awarded for correct answers only. There are no penalties for incorrect answers.

All questions are worth 1 mark.

For short-answer questions, write clearly and neatly in the space provided.

Calculators are not permitted during any portion of the test.

When you are finished with this section, review your work until the invigilator instructs you to proceed to the next section. Once you proceed to the next section, you may not return to this section.

At the invigilator’s prompt, turn the page and begin the section.
Under UK law, it is illegal to conduct DNA tests on someone’s genetic material without their written consent, and with good reason. Some states in the USA have not banned so-called ‘stealthy’ DNA tests; as such, there is no legal barrier to obtrusively personal scientific tests being done, with results that bring life-altering consequences. In one case, a wife who suspected infidelity stole a pair of her husband’s underpants and had them tested for traces of another person’s genetic material; in another instance, a man who doubted he was the father of a former lover’s son conducted a paternity test using the boy’s discarded chewing gum, without the knowledge of the boy’s mother. Thankfully, these are isolated examples rather than everyday occurrences, as few companies exist to conduct stealthy DNA tests, even where they are legal. One can conclude from this that most scientists hold themselves to higher standards than those prescribed by law.

Which of the following is the central assumption implicit in the above argument?

A. The man who conducted a DNA test using his alleged son’s chewing gum did so without the permission of the boy’s mother.
B. Some US companies conduct stealthy DNA tests without threat of legal penalty.
C. Work done by scientists may have unforeseen consequences.
D. Scientists bear responsibility for the consequences of their work.
E. There are no companies that conduct stealthy DNA tests in the UK.

Two dice have been ‘loaded’, so that the probability of either die rolling a 6 is \( \frac{1}{2} \), rather than the usual \( \frac{1}{6} \), and the probability of either die rolling a 1, 2, 3, 4 or 5 is \( \frac{1}{10} \) for any one of those numbers. If both dice are rolled at the same time, what is the probability that the sum of the numbers rolled will be 11 or larger?

A. \( \frac{3}{10} \)
B. \( \frac{1}{3} \)
C. \( \frac{7}{20} \)
D. \( \frac{13}{36} \)
3 Jackie pours soda from a two-litre bottle into cups that hold 300 mL each. She starts with a full bottle, and fills each cup (except for the last) to 75% capacity.

How much soda will she pour into the last cup?

\[
\begin{array}{ccc}
& & \text{mL} \\
\end{array}
\]

A 75ml.
B 100ml
C 175ml
D 200ml
E 225ml

**Question 4 refers to the following conversation:**

**Toby**

Of all sporting events, The Ashes are of greatest interest to Englishmen, and anyone with pride in his nation would feel obliged to watch all the test matches. As each series of The Ashes consists of five test matches, viewing The Ashes in its entirety takes up a good deal of time, and as such requires a committed backer to miss several weeks of work. This commitment must be balanced against the infrequent scheduling of The Ashes: these contests between England and Australia occur but once every three years. Since The Ashes are relatively rare, and hold such a place in national pride, employers should make accommodations as necessary to allow staff to take time off work to view all the test matches, so that Englishmen can meet their obligations to sport and country without using up all their days of annual leave.

**Max**

You are talking rubbish. I love cricket, and my country, as much as you. These are things we value, and believe in, to be sure. But each test match takes days. To watch The Ashes in its entirety, you’d miss nearly a month of work. Your personal beliefs and values do not justify any extra time off work, beyond the days of leave you are already allowed. Next, you’ll want time off for the FA Cup!

4 Which of the following statements would weaken Max’s response to Toby?

A England won the last series of The Ashes.
B Max leaves work an hour early to watch his favourite football club whenever they play an evening match at their home ground.
C In a survey, a majority of men in England said they plan to watch at least one test match in the next series of The Ashes.
D All the senior managers and executives at Toby’s company are Australians.
E Employers in England normally allow staff to take time off for religious holidays, in excess of their allotted days of leave.
Questions 5 to 8 refer to the following information:

The tables below shows the UK resident population by foreign country of birth, in thousands, for the 15 most common countries of birth in 2004 and 2009.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>2004</th>
<th>Rank</th>
<th>Country</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>India</td>
<td>502</td>
<td>1</td>
<td>India</td>
<td>660</td>
</tr>
<tr>
<td>2</td>
<td>Republic of Ireland</td>
<td>452</td>
<td>2</td>
<td>Poland</td>
<td>503</td>
</tr>
<tr>
<td>3</td>
<td>Pakistan</td>
<td>281</td>
<td>3</td>
<td>Pakistan</td>
<td>433</td>
</tr>
<tr>
<td>4</td>
<td>Germany</td>
<td>275</td>
<td>4</td>
<td>Republic of Ireland</td>
<td>408</td>
</tr>
<tr>
<td>5</td>
<td>Bangladesh</td>
<td>225</td>
<td>5</td>
<td>Germany</td>
<td>295</td>
</tr>
<tr>
<td>6</td>
<td>South Africa</td>
<td>178</td>
<td>6</td>
<td>South Africa</td>
<td>221</td>
</tr>
<tr>
<td>7</td>
<td>USA</td>
<td>145</td>
<td>7</td>
<td>Bangladesh</td>
<td>209</td>
</tr>
<tr>
<td>8</td>
<td>Kenya</td>
<td>143</td>
<td>8</td>
<td>USA</td>
<td>184</td>
</tr>
<tr>
<td>9</td>
<td>Jamaica</td>
<td>136</td>
<td>9</td>
<td>Kenya</td>
<td>148</td>
</tr>
<tr>
<td>10</td>
<td>Italy</td>
<td>114</td>
<td>10</td>
<td>Jamaica</td>
<td>147</td>
</tr>
<tr>
<td>11</td>
<td>Australia</td>
<td>112</td>
<td>11</td>
<td>Nigeria</td>
<td>146</td>
</tr>
<tr>
<td>12</td>
<td>Poland</td>
<td>95</td>
<td>12</td>
<td>France</td>
<td>125</td>
</tr>
<tr>
<td>13</td>
<td>France</td>
<td>94</td>
<td>13</td>
<td>Australia</td>
<td>123</td>
</tr>
<tr>
<td>14</td>
<td>Zimbabwe</td>
<td>91</td>
<td>14</td>
<td>Philippines</td>
<td>118</td>
</tr>
<tr>
<td>15</td>
<td>Nigeria</td>
<td>58</td>
<td>15</td>
<td>Zimbabwe</td>
<td>110</td>
</tr>
</tbody>
</table>

Total foreign-born population of the UK: 5,233,000 (2004); 6,700,000 (2009)
Total UK population: 59,835,000 (2004); 61,792,000 (2009)

5. What was the percentage increase in UK residents born in Nigeria, from 2004 to 2009?
   A) 50%
   B) 55%
   C) 60%
   D) 67%

6. Which country saw the largest decrease in its share of the UK foreign-born population from 2004 to 2009?
   A) Republic of Ireland
   B) Bangladesh
   C) Kenya
   D) Jamaica
The graph below is missing its part of its title, and the label for one of its bars.

Which of the following gives the correct title, and the possibilities for the missing label?

<table>
<thead>
<tr>
<th>TITLE</th>
<th>LABEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>A  Increases in UK Foreign-Born Population</td>
<td>South Africa or USA</td>
</tr>
<tr>
<td>B  Percentage Increases in UK Foreign-Born</td>
<td>Australia or Jamaica</td>
</tr>
<tr>
<td>C  Percentage Decreases in UK Foreign-Born</td>
<td>Republic of Ireland or Bangladesh</td>
</tr>
<tr>
<td>D  Increases in UK Foreign-Born Population, in Thousands</td>
<td>Australia or Jamaica</td>
</tr>
<tr>
<td>E  Percentage Increases in UK Foreign-Born Population</td>
<td>South Africa or USA</td>
</tr>
</tbody>
</table>

What percentage of the total UK population was foreign-born in 2009?

A  9%
B  10%
C  11%
D  12%
A toymaker paints four wooden blocks, with one of the following letters on each side:

A D E N R S T

The blocks are cube-shaped, and they are painted identically, that is, all four blocks are painted with the same six letters in the same relative positions.

At a toy fair, the blocks are displayed with letters as shown. The toymaker offers a prize to anyone who can correctly identify the word spelt across the bottoms of the blocks.

The outermost sides of blocks 1 and 4 are covered by the display. As a hint, the toymaker confirms that the same letter appears on both these outermost sides.

What word or words could be spelt across the bottoms of the blocks, reading from position 4 to position 1? (Select all the answers that could be spelt.)

- AREA
- ARES
- ARTS
- ASEA
- EASE
- SEAS
- SETS
- STET
10. The Metropolitan Police have announced that knife crime has replaced terrorism as their top crime-fighting priority. They suggest that members of the public are more likely to be killed by knife-wielding teenagers than by terrorists. Nonsense. A single terrorist attack can kill hundreds, if not thousands; most knife crimes result in a single fatality.

Which two of the following statements indicate flaws in the reasoning above?

A. The relative frequency with which various types of crimes are committed is not considered.
B. The motives of terrorists are compared to the motives of knife-wielding teenagers.
C. Victims of actual crimes are compared with victims of possible crimes.
D. The number of knives purchased by teenagers is not considered.
E. The role of parents in preventing knife crime is not considered.

11. A sixth-form college has a total of 200 students, 55 per cent of them girls. The total number of students reading for an A-level in biology is equal to one-third the total number of boys. How many boys are not reading for an A-level in biology, if ten per cent of the girls are?

A. 19
B. 30
C. 71
D. 90
E. 99
In 1997, 92% of children in the UK were given the measles, mumps and rubella (MMR) vaccine. Following a report in the medical journal *The Lancet* in February 1998, which suggested the MMR vaccine might be linked to cases of autism, the uptake of the MMR vaccine dropped, reaching a low of 80% of UK children in 2003, a rate dangerously below the 95% uptake required to stop the spread of measles. The greatest decline in uptake of the MMR vaccine followed widespread media attention to its alleged link to autism in 2001 and 2002. The alleged link between the vaccine and autism has since been disproved, though uptake numbers for the MMR vaccine have not returned to their levels before the onset of the controversy.

A recent study has revealed that parents responded differently to the autism controversy, depending on their level of education. Before 1998, highly educated parents were eight percent more likely than parents of lower education levels to take up the MMR vaccine for their children; by the onset of widespread media attention to the controversy in 2001, the trend had reversed, and highly educated parents were three percent less likely than parents with less education to take up the MMR vaccine. Interestingly, by 2001, parents with higher levels of education had also come to decline uptake of other childhood vaccines not linked to the autism controversy, at rates relatively higher than those of less-educated parents. Researchers believe this is due to the ungrounded fear that 'too many' vaccines could cause unforeseen and catastrophic health problems to very small children.

Which of the following three statements can safely be inferred from the above paragraphs?

1. Highly educated people are more likely to read scientific journals than people of lower education levels.
2. Uptake rates of the MMR vaccine in the UK were not sufficient to stop the spread of measles before or after publication of the report alleging a link to autism in 1998.
3. Highly educated parents are more likely to be influenced by studies in scientific journals than they are by reports in the wider media.

A. 1 only
B. 2 only
C. 3 only
D. 1 and 2
E. 1 and 3
F. 1, 2 and 3
The following table shows the cost of preparing various puddings at a restaurant, as well as the prices charged to customers and number of puddings sold, in the past month.

<table>
<thead>
<tr>
<th></th>
<th>Cost</th>
<th>Price</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baked Alaska</td>
<td>£4.85</td>
<td>£11.95</td>
<td>806</td>
</tr>
<tr>
<td>Cherries Jubilee</td>
<td>£2.15</td>
<td>£7.25</td>
<td>1089</td>
</tr>
<tr>
<td>Passion Fruit Sorbet</td>
<td>£1.10</td>
<td>£4.50</td>
<td>1945</td>
</tr>
<tr>
<td>Peach Melba</td>
<td>£2.40</td>
<td>£6.50</td>
<td>1561</td>
</tr>
<tr>
<td>Strawberries Romanoff</td>
<td>£3.75</td>
<td>£7.25</td>
<td>2027</td>
</tr>
<tr>
<td>Tiramisu</td>
<td>£1.95</td>
<td>£4.95</td>
<td>2213</td>
</tr>
</tbody>
</table>

Cost and Price are shown for individual servings of each pudding, except for Baked Alaska, as each Baked Alaska serves two, and is priced accordingly.

The restaurant determines a pudding’s profits by subtracting total cost from total sales. By this measure, which pudding earned the highest profits in the month shown above?

A. Baked Alaska
B. Passion Fruit Sorbet
C. Strawberries Romanoff
D. Tiramisu
Questions 14 to 17 refer to the following information:

ENERGY USE IN KALOPSIA BY YEAR, 1975-2005
(in millions of megawatt-hours)

ENERGY USE IN KALOPSIA BY SECTOR, 1985-2005

Total Personal Use = Population x Per-capita Personal Use

State use = Energy used in state-funded offices and facilities, such as schools and hospitals, as well as energy used on state-funded works projects
ENERGY SOURCES IN KALOPSIA, 2005

Coal 30%
Nuclear 20%
Oil & gas 45%
Renewables 5%

‘Renewables’ consists of energy from wind, wave and solar sources.

The Kalopsian Government has pledged to lower the rate of consumption of ‘fossil fuels’ (coal, oil and gas) to 65 per cent or lower by 2015.

14 Per-capita personal use was 44 megawatt-hours in 2005. What was the population of Kalopsia in 2005?

A 3,864,000
B 4,034,000
C 4,398,000
D 5,648,000

15 Hospitals accounted for one-third of state-used energy in 1985, and 20% in 1990. What was the percentage change in energy used by hospitals from 1985 to 1990?

A Decrease of 50%
B Decrease of 25%
C Decrease of 12.5%
D Increase of 12.5%
E Increase of 25%
F Increase of 50%
BMAT Practice Test

16 Which initiative would be most likely to help the Government reach their target for reduced fossil fuel consumption by 2015?

A  Building three new nuclear power plants; total time for planning, approval and construction of each nuclear power plant is estimated at seven to eight years.

B  Installing 500 new wind turbines in ‘wind farms’ along the coast; selecting the sites, getting approval and putting up the wind turbines would take two to three years.

C  Lifting the ban on deep-sea drilling in the oil-rich waters off Kalopsia’s coast; private companies would choose locations and erect drilling platforms in less than a year.

D  Constructing a pipeline to a nearby country that has never provided Kalopsia with natural gas; work on the pipeline would take four to five years to complete.

17 How many megawatt-hours of energy were generated from renewable sources in 2005?

A  31.9 million

B  33.8 million

C  35.5 million

D  37.2 million
If I don’t take my wellies to the music festival, it will rain during the festival. If it rains during the festival, there will be lots of mud, and it will difficult to walk. If it is difficult to walk, I will fall in the mud.

Which of the following can be safely concluded, based on the information above?

A. If it doesn’t rain during the festival, I will have taken my wellies.
B. If it doesn’t rain during the festival, there will not be lots of mud.
C. If I don’t fall in the mud, I will not have taken my wellies.
D. If it is not difficult to walk, I will not fall in the mud.
E. If I go to the music festival, I will take my wellies.

STOP. IF YOU FINISH BEFORE TIME IS CALLED, CHECK ANY QUESTIONS YOU HAVE MARKED FOR REVIEW. YOU MAY GO BACK TO QUESTIONS IN THIS SECTION ONLY.
SECTION 2: SCIENTIFIC KNOWLEDGE AND APPLICATIONS

TIME: 15 MINUTES

DIRECTIONS: Answer every question. Points are awarded for correct answers only. There are no penalties for incorrect answers.

All questions are worth 1 mark.

For short-answer questions, write clearly and neatly in the space provided.

Calculators are not permitted during any portion of the test.

When you are finished with this section, review your work until the invigilator instructs you to proceed to the next section. Once you proceed to the next section, you may not return to this section.

At the invigilator's prompt, turn the page and begin the section.
1. Some students are experimenting with an inflated balloon. The students have put the balloon into a sealed flask, which is later connected to a vacuum pump.

Which of the following statements are supported by this observation?

1. The balloon contains an inert gas.
2. The volume of a gas is inversely related to its pressure.
3. The volume of a gas is proportional to its temperature.

A. 1 only  
B. 2 only  
C. 3 only  
D. 1 and 2  
E. 2 and 3
A number of enzymes are produced by the body to effect digestion.

Which of the following choices is a correct representation of the class, source and function of typical human digestive enzymes?

<table>
<thead>
<tr>
<th>Enzyme class</th>
<th>Produced by</th>
<th>Substrate</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Protease</td>
<td>Stomach</td>
<td>Proteins</td>
</tr>
<tr>
<td>B</td>
<td>Amylase</td>
<td>Pancreas</td>
<td>Starch</td>
</tr>
<tr>
<td>C</td>
<td>Protease</td>
<td>Pancreas</td>
<td>Polypeptides</td>
</tr>
<tr>
<td>D</td>
<td>Lipase</td>
<td>Small intestine</td>
<td>Proteins</td>
</tr>
<tr>
<td>E</td>
<td>Amylase</td>
<td>Salivary gland</td>
<td>Glucose</td>
</tr>
</tbody>
</table>

Some statements about neon are given below.

1. It is a halogen.
2. It is a colourless gas at room temperature.
3. It has a lower density than air.
4. It gives out a bright red light when electric current passes through it.
5. It doesn’t form covalent or ionic bonds.
6. It is easily broken apart at room temperature.

Which of the statements are correct about neon?

A. 1, 2 and 4
B. 2, 3 and 4
C. 4, 5 and 6
D. 1, 4 and 6
E. 2, 4 and 5
F. 3, 4 and 5
4. A 4x4 is leaking oil and drips every four seconds, leaving a pattern along the road from J to M as shown in the diagram (not drawn to scale).

![Diagram](https://via.placeholder.com/150)

The drips between J and K are equal distances apart, as are those between L and M.

What is the acceleration of the 4x4 from K to L?

- A 0
- B 0.125 m/s²
- C 0.167 m/s²
- D 0.25 m/s²

5. If \((100x - 99)^3 = (5x)^6\), what is one possible value of \(x\)?

- A \(\frac{11}{5}\)
- B \(\frac{5}{9}\)
- C \(\frac{5}{2}\)
- D \(\frac{9}{5}\)
Sophie is taking part in a study on red-green colour blindness, a sex-linked recessive trait. She lists her immediate family and their status as follows:

<table>
<thead>
<tr>
<th>Family Member</th>
<th>Relationship to Sophie</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sophie</td>
<td>Herself</td>
<td>Not affected</td>
</tr>
<tr>
<td>Ben</td>
<td>Husband</td>
<td>Not affected</td>
</tr>
<tr>
<td>James</td>
<td>Father</td>
<td>Red-green colour blind</td>
</tr>
<tr>
<td>Alice</td>
<td>Mother</td>
<td>Unknown (deceased)</td>
</tr>
<tr>
<td>Lucy</td>
<td>Sister</td>
<td>Red-green colour blind</td>
</tr>
</tbody>
</table>

Given this data, which of the following describe the status of Ben and Sophie’s future children with regard to red-green colour blindness? (Shade all that apply.)

- A. More data is needed to determine whether the children will be red-green colour blind
- B. None of the children will be red-green colour blind
- C. Half of the females will be carriers
- D. Half of the males will be carriers
- E. Half of the females will be red-green colour blind
- F. Half of the males will be red-green colour blind
- G. All of the females will be carriers
- H. All of the males will be red-green colour blind

The molecular weight of titanium oxide is 144 g/mol. If approximately 33% of the mass of titanium oxide is provided by oxygen, what is the correct formula for titanium oxide? (Atomic weight of Ti = 48 and O = 16)

- A. Ti₃O₂
- B. Ti₂O₃
- C. TiO₂
- D. TiO₃
Two smaller squares of side \( p \) and \( q \) are marked out from a larger square of area 50 cm\(^2\).

If \((x - p)(x - q) = 0\), then which of the following is true?

A \[ x^2 = (5\sqrt{2})x + 3\sqrt{2} \]

B \[ x^2 = 8x - 18 \]

C \[ x^2 = (5\sqrt{2})x - 12 \]

D \[ x^2 = 12x + 5\sqrt{2} \]

E \[ x^2 = 50 \]
9. Methylbenzene can be oxidised by acidified potassium permanganate to give benzoic acid.

\[ q \text{C}_6\text{H}_5\text{CH}_3 + r \text{KMnO}_4 + s \text{H}_2\text{SO}_4 \rightarrow q \text{C}_6\text{H}_5\text{COOH} + t \text{K}_2\text{SO}_4 + u \text{MnSO}_4 + v \text{H}_2\text{O} \]

Give the correct values of \(q - v\) to balance this equation.

<table>
<thead>
<tr>
<th></th>
<th>q</th>
<th>r</th>
<th>s</th>
<th>t</th>
<th>u</th>
<th>v</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>B</td>
<td>5</td>
<td>6</td>
<td>9</td>
<td>3</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>D</td>
<td>5</td>
<td>4</td>
<td>10</td>
<td>2</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>E</td>
<td>5</td>
<td>6</td>
<td>10</td>
<td>3</td>
<td>7</td>
<td>11</td>
</tr>
</tbody>
</table>

10. A parachutist in free fall reaches a terminal velocity of \(a\) ms\(^{-1}\) at time \(t_a\) and opens his parachute 3 s later. With his parachute open he reaches a new terminal velocity \(b\) ms\(^{-1}\) at time \(t_b\). The parachutist and his equipment together weigh \(p\) kg.

Which of the following expressions represents the difference in the magnitude of air resistance acting on the parachutist from time \(t_a\) to time \(t_b\)?

[You may assume acceleration due to gravity \(g = 10\) ms\(^{-2}\)]

A. 0
B. \(a(t_a + 3) - bt_b\)
C. \(\frac{1}{2} p(a - b)^2\)
D. 10 \(p\)
E. It cannot be expressed using the information presented.
A woman decides to switch from using a combined oral contraceptive (‘the pill’) to using a contraceptive patch. The patch contains the same medicines as the pill and works in the same way, but is worn like a sticking plaster on the arm instead of taken orally.

Which of the following choices represents a valid sequence for a direct route from the site of absorption to a site of action of the oestrogenic compound in the patch?

NB The correct sequence may not list every individual step of circulation, but the steps will be in the correct order.

A arm veins → inferior vena cava → right atrium → pulmonary vein → aorta → carotid artery → brain

B arm veins → superior vena cava → right ventricle → pulmonary vein → left ventricle → left atrium → ovary

C skin capillaries → hepatic portal vein → right atrium → pulmonary trunk → left atrium → aorta → brain

D arm veins → inferior vena cava → pulmonary artery → pulmonary vein → left atrium → aorta → ovary

E skin capillaries → superior vena cava → right atrium → right ventricle → left ventricle → carotid artery → brain
Question 12 refers to the following illustration:

Which of the following sets of inequalities represents the shaded area above?

A  \( x^2 - y > 1 \)  \( 2x + y < 3 \)  \( x + y > 6 \)
B  \( x + y < x^2 \)  \( x - y < 3 \)  \( x + 2y > 6 \)
C  \( x^2 - y > 1 \)  \( 2x - y > -3 \)  \( 2x + 2y > 6 \)
D  \( x + y > x^2 \)  \( 2x - y > -3 \)  \( x + y > 6 \)
E  \( x + y > x^2 \)  \( x - y < -3 \)  \( x - y < 6 \)
SECTION 3: WRITING

TIME: 30 MINUTES

DIRECTIONS: You have 30 minutes to select an essay title (from a choice of four), and then plan and write an essay. Your essay is limited to one side of A4.

In this task, you are expected to show how well you can order and explore ideas, and convey these ideas in clear, effective writing.

You may not use dictionaries or any other reference books or resources.

Essays are assigned a numerical score. To achieve a top mark, you must address all aspects of the question and write compellingly with few errors in logic or in use of English.

At the invigilator’s prompt, turn the page and begin the section.
YOU MAY USE THIS SPACE TO PLAN YOUR ESSAY.

NOTHING YOU WRITE HERE WILL BE CONSIDERED IN ASSESSING YOUR ESSAY OR IN ASSIGNING A MARK.
YOU MUST ANSWER ONLY ONE OF THE FOLLOWING QUESTIONS

1. If it can’t be expressed in figures, it is not science; it is opinion.
   Lazarus Long

Write an essay in which you address the following points:

What does the author mean by this statement? Can you define science in a way that does not limit it to data? What criteria would you use to define whether a hypothesis or theory constitutes ‘science’?

2. A smart mother often makes a better diagnosis than a poor doctor.
   August Bier, German surgeon, 1861-1949

Write an essay in which you address the following points:

In what circumstances would you advise someone to rely on his or her mother for a diagnosis, rather than a doctor? What are the advantages of relying on a doctor? By what criteria could someone assess the reliability of a doctor’s diagnosis, and what should someone do if his or her doctor falls short of these standards?

3. It is inexcusable for scientists to torture animals; let them make their experiments on journalists and politicians.
   Henrik Ibsen

Write an essay in which you address the following points:

Why is it ‘inexcusable’ for scientists to conduct experiments on animals? What problems might arise if experiments on animals were banned, and scientists limited to making experiments on humans? Where would you draw the line between what constitutes a legally or ethically acceptable experiment, and what constitutes ‘torture’?

4. Nothing is more fatal to health than over care of it.
   Benjamin Franklin

Write an essay in which you address the following points:

What constitutes ‘over care’ of health, and how can it be ‘fatal’? What are the dangers in trying to ‘minimise’ care? How can doctors take a balanced approach?

STOP. IF YOU FINISH BEFORE TIME IS CALLED, CHECK ANY QUESTIONS YOU HAVE MARKED FOR REVIEW. YOU MAY GO BACK TO QUESTIONS IN THIS SECTION ONLY.
# ANSWER KEY

## Section 1
1. D
2. C
3. D
4. E
5. C
6. A
7. D
8. C
9. A and D
10. A and C
11. C
12. B
13. C
14. B
15. F
16. B
17. C
18. A

## Section 2
1. B
2. B
3. E
4. D
5. D
6. C and F
7. B
8. C
9. B
10. A
11. E
12. D
### HOW WILL I SCORE ON TEST DAY?

Count up your number of correct answers in each section, and then find your corresponding BMAT score in the conversion tables below.

<table>
<thead>
<tr>
<th>Section 1</th>
<th>Section 2</th>
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<tbody>
<tr>
<td><strong>NUMBER CORRECT</strong></td>
<td><strong>BMAT SCORE</strong></td>
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If you scored below 4.0: You’ve got a lot of work to do, so you can earn a score that will qualify for interview. But it’s easy to improve your scores from here, so don’t panic. Kaplan has the strategies and techniques that will help you raise your scores and your confidence, plus support from an expert teacher and loads of practice tests to help you get the scores you need for medical school.

If you scored from 4.0 to 6.0: Your score is close to the average, but you still have plenty of room for improvement. If you answer just a few more questions correctly, you can increase your score significantly, which will make all the difference in getting into medical school. Just remember, this is only a practice test and you can still improve your scores if you prepare with Kaplan!

If you scored 6.0 or above: Your score is highly competitive, and you are in very good shape. But remember, you must repeat this performance on Test Day! Let Kaplan teach you the strategies that will help you build confidence, maintain consistency and help you earn a place at the medical school of your dreams!

No matter how you scored: This UKCAT practice test is only an indication of your current testing ability. The performance averages listed are the average scores of all test takers, including the vast majority who do little or nothing to prepare. Imagine what you can achieve when you apply yourself and develop test-specific knowledge and techniques. Let Kaplan help you get a higher score by showing you what’s tested, which methods are the best, and how to use time to your greatest advantage. Practise smarter and raise your scores with Kaplan.