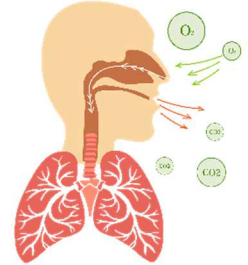


Complete the gaps in the text. Choose **A, B, C** or **D**

## The Value of Breathing Exercises

As automatic as breathing generally is, many people with healthy lungs could benefit from (1) \_\_\_\_\_ more attention to it, says Payel Gupta, an asthma and allergy specialist in New York City. When we breathe, we bring in oxygen and (2) \_\_\_\_\_ carbon dioxide. Various forms of deep breathing have been linked to cardiovascular benefits, including increased blood (3) \_\_\_\_\_ and improved blood pressure. Taking deep breaths can also help you manage stress and improve cognitive function.



While there has been little study on how helpful formal breathing exercises are for healthy people, they can certainly 'remind us that it's important to breathe and to be mindful of how you're breathing,' Gupta says. 'I think anyone can benefit.'

You may want to give breathing exercises a try, (4) \_\_\_\_\_ it's to reduce shortness of breath associated with a condition such as asthma or simply to alleviate some stress and anxiety. Here are two exercises to start with. Practice these for 5 to 10 minutes a day or as (5) \_\_\_\_\_. When you're not feeling well, you can also use them to open up the airways more, explains Gupta.

They help slow down your breathing and can also help get additional air out of your lungs. This can help you (6) \_\_\_\_\_ the feeling of breathlessness and make physical activity easier.

### Diaphragmatic (belly) breathing.

People who take short, shallow breaths might not make (7) \_\_\_\_\_ use of this important muscle. To retrain yourself to use your diaphragm more regularly, place a hand on your stomach so that you can feel it (8) \_\_\_\_\_ and fall. Breathe in through your nose, then out through your mouth for two to three times as long.

### Box breathing.

When you need to relax or de-stress, try breathing in for a count of four, holding your breath for a count of four, exhaling for a count of four, and holding your breath again for another four count. Repeat this four-sided breathing (9) \_\_\_\_\_ until you're feeling calm. If you regularly have trouble (10) \_\_\_\_\_ your breath, you should visit a doctor who can help determine whether it's related to a disorder such as asthma.

- |    |             |               |             |                  |
|----|-------------|---------------|-------------|------------------|
| 1  | A) gaining  | B) having     | C) paying   | D) deducing      |
| 2  | A) expect   | B) excel      | C) expel    | D) breathe       |
| 3  | A) movement | B) flow       | C) amounts  | D) colour        |
| 4  | A) which    | B) even       | C) so that  | D) whether       |
| 5  | A) more     | B) order      | C) needed   | D) necessity     |
| 6  | A) manage   | B) understand | C) keep     | D) give          |
| 7  | A) some     | B) bad        | C) this     | D) full          |
| 8  | A) rise     | B) raise      | C) blow     | D) deflate       |
| 9  | A) try      | B) types      | C) method   | D) kinds         |
| 10 | A) finding  | B) feeling    | C) catching | D) understanding |

Read reviews **A-D** and answer the questions. Choose **A, B, C** or **D**

### Review A

I bought this book for my brother as a birthday present and he absolutely loved it. He has not always had an interest in the sciences or maths so I was a little nervous that this book might be a little boring. However, this has not been the case at all. He loved questions like: *'How many unique English tweets are possible? How long would it take for the population of the world to read them out loud?'*

It has covered enough bits to keep him interested and uses plenty of brilliant witty humour to make it a highly entertaining read. You don't have to know anything about anything - you can just read, learn, and enjoy. My brother was thinking of re-gifting this to all his friends to read but instead he'll encourage them to purchase it. I think I'll be reading it next.

### Review B

This book opens with the best disclaimer I have ever seen.

*'Do not try any of this at home. The author of this book is an internet cartoonist, not a health or safety expert. He likes it when things catch fire or explode, which means he does not have your best interests in mind. The publisher and the author disclaim responsibility for any adverse effects resulting, directly or indirectly, from information contained in this book.'*

That disclaimer really sets the tone for this fun book about science. Dangerous ideas ahead folks! Don't get too close...!

The author used to work as a researcher at NASA, and now he creates web comics (which sounds less stressful than NASA). In this book, he takes 'absurd hypothetical questions' from readers and tries to answer some of them.

### Review C

This is a nice book but the author delves into many 'unimaginable' questions and uses the concepts from science, maths and more to answer them. If you are very keen on science you will love this book. I found it interesting up to about the initial 30-40 pages but after that it was somewhat tedious to keep up. People have stretched their imagination and curiosity in raising some of the questions and the author has clearly done extensive research and analysis in responding. I have to admit I laughed out loud at his drawings and some of his answers, which is not something that usually happens when I'm reading about science. But 300 pages of this stuff becomes a bit too much.

### Review D

I love this book! It is both hilariously funny and thought provoking. It's educational and at the same time gives you all sorts of "did you know" stories to bore your friends and family for months. It's probably best for mid-secondary school (13 and over) up to any age as I think you need a simple grounding in science to get the jokes at times. I can see it would be a great way for an upper secondary school pupil to really annoy their science teachers. And of course, for science teachers to really engage their pupils.

It's a total dip-in book. The short chapters (3-6 pages) are pretty much random, and cover all areas of science. I've learnt stuff about genetics that I never realised, as well as about radioactivity, the periodical table and much more besides. As I read it I kept chuckling away and giggling and generally annoying people right through the holidays.

11 The writer of review A says that\_\_\_\_\_.

- A) her brothers keen interest in science made her nervous about buying the book
- B) she has not read the book yet
- C) you just need to know a little about everything to enjoy it
- D) her brother will buy the book for his friends now

- 12 In which review does the writer suggest that the book becomes overwhelming?**
- A) A
  - B) B
  - C) C
  - D) D
- 13 From the reviews we understand that \_\_\_\_\_.**
- A) the book was written to answer questions often asked by scientists
  - B) the author did the research for the book while working at NASA
  - C) the book does not have a particular order of topics
  - D) the chapters in the book can be quite long
- 14 Reviewer 'D' would probably recommend this book to \_\_\_\_\_.**
- A) students who are over thirteen with no knowledge of science
  - B) those aged thirteen if they are interested in becoming scientists
  - C) teenagers over thirteen with some knowledge of science but not adults
  - D) anybody old enough with some knowledge of science
- 15 We understand from the reviews that many of the questions in the book are \_\_\_\_\_.**
- A) realistic
  - B) fake
  - C) incredible
  - D) rational

**For questions 16-18 choose A, B, C or D**

**In which review does the writer \_\_\_\_\_?**

say the book could be used to make life difficult for teachers

say the book would be great for a science enthusiast

believe the author has done a lot of research for the book

<b>16</b>	
<b>17</b>	
<b>18</b>	

Read the article and answer the questions. Choose **A, B, C** or **D**

## **Fascinating facts about our dreams**

One myth about dreams is that they are unimportant and just reflect the basic occurrences of our daily experiences. Many studies have revealed fascinating aspects of dreaming and here we look at some of these surprising facts.

### **Age makes a difference to how you dream**

Researchers found that about 80 percent of participants younger than 30 years old dreamed in colour. But by 60 years old, only about 20 percent said they did. The researchers speculated that colour TV might play a role in the generational difference.

What is particularly interesting is that older people reported that both their colour dreams and black and white dreams were equally as vivid. The younger participants, however, said that their black and white dreams were of poorer quality. The researchers noted, "This raises the possibility that the younger participants didn't really have any black and white dreams at all, but were simply labelling poorly remembered dreams as black and white."

### **Do dreams actively help us solve problems?**

When you're studying for an exam or dealing with something difficult, have you ever heard the advice 'sleep on it'? It's a common belief that things will make more sense in your mind after a good night's sleep, and it turns out this belief is not rooted in fiction but in fact.

### **Men and women dream differently**

A study from 2008 has shown that men's dreams tend to have more aggressive content and physical activity, while women's dreams contain more rejection and exclusion, as well as more conversation than physical activity. Women were also found to have slightly longer dreams that feature more characters. When it comes to the characters that tend to appear in the dreams, 67% of characters in men's dreams are other men whereas 48% of characters in women's dreams are other women.

### **All the faces in our dreams are ones we've seen**

It is a known fact that we cannot invent new faces in our dreams. That means, any face you see in your dreams is one you have seen somewhere before. It doesn't mean, however, that these dream characters are necessarily people that you know well or know at all. We all see new faces on a daily basis and they can appear in our dreams, even if we don't remember seeing them.

### **Is it possible to control dreams?**

Lucid dreaming is a state in which a person is aware of the fact they are dreaming while they are still asleep. It is considered a combination of consciousness and REM, which allows the dreamer to control and direct the dream's content.

According to interesting research done by Jayne Gackenbach, a psychologist at Grant MacEwan University in Canada, people who play video games often are more likely than non-gamers to have lucid dreams where they view themselves outside of their own bodies. They were also better able to influence their dream worlds as if controlling a video-game character. 'Gamers are used to controlling their game environments, so that can translate into dreams,' Dr. Gackenbach says.

## Night owls have more nightmares

Staying up late has its advantages but also a few downsides. One of them, apparently, is an increased likelihood to experience nightmares. Research published in 2011 in the journal *Sleep and Biological Rhythms*, revealed that night owls are more likely than their early-bird counterparts to experience nightmares. In the study, 264 university students were asked to rate how often they have nightmares on a scale of 0-4 (0 means 'never' while 4 means 'always'). The participants who tend to stay up late scored 2.10, while the early risers averaged at 1.23.

This is a significant difference, according to the researchers. However, they were not sure what the cause is. One possibility is the stress hormone cortisol, which peaks in the morning, right before we wake up. This is the time when people are more likely to be in REM, or dream sleep. If you're still sleeping at that time, the cortisol rise could trigger vivid dreams or nightmares.

### 19 Which of the following is true?

- A) Dreams are the fascinating recreation of what we have lived in our daily lives.
- B) If you play video games you can easily become a lucid dreamer.
- C) The only dreaming animals mentioned in the passage are owls.
- D) Men's dreams are shorter than those of women.

### 20 From the information in the text we can assume that \_\_\_\_\_.

- A) a person who is forty will probably dream in colour 20% of the time
- B) a person who is forty will probably dream in colour more than 20% of the time
- C) a person who is forty will sometimes dream in colour
- D) a person who is forty will dream in black and white 80% of the time

### 21 What does the writer tell us about solving problems in our dreams?

- A) The writer says that this is rooted in fiction.
- B) The writer says it's true that dreaming can help us solve problems.
- C) The writer says it can be used to make our problems easier.
- D) The writer says it's only a *belief* and not a fact.

### 22 What may cause night owls to have more nightmares?

- A) Because they don't go to bed as early as they used to.
- B) The reason could be an increase in a hormone.
- C) Because they scored 2.10 in the questionnaire.
- D) Because they do not have enough time to experience REM sleep.

23 According to Dr. Gackenbach \_\_\_\_\_.

- A) gamers can see themselves outside of their own bodies
- B) it is easier for gamers to dream
- C) gamers may have better control over other people's dreams
- D) gamers may be able to use some of their gaming skills while lucid dreaming

24 What can we say about the characters we see in our dreams?

- A) They will be 67% male.
- B) Only 47% will be female.
- C) They are not people we have already seen.
- D) We may or may not know them.

25 What do researchers suspect about young people's dreams?

- A) That they may not in fact be dreaming in black and white.
- B) That 80% of their dreams are in colour.
- C) That young people find black and white dreams worse than those in colour.
- D) Young people do not dream in black and white because they watch too much TV.

Choose the word(s) closest in meaning to the **underlined** word(s) \_\_\_\_\_  
For questions 32-35 choose **A, B, C** or **D**

### An Engineering Marvel

Marvels are innovative structures and things that make one gaze in awe. In today's world, modern engineering has done amazing deeds when it comes to creating some of the world's rarest marvels. Engineering has created structures that have the potential to affect Earth's movements, such as the Three Gorges Dam.

A dam is a large barrier built across rivers and streams to **(26) confine** and utilize the flow of water for human purposes such as irrigation and the generation of hydroelectricity.

The idea for the Three Gorges Dam was first proposed by Dr Sun Yat-Sen in 1919. He put forward the idea of the possibility of damming the Yangtze River to help control floods and generate electricity. However, the idea of building a dam large enough to hold the Yangtze River at bay seemed **(27) unfeasible** for all who tried to undertake the task but the project was finally started in 1994. However, there was much debate concerning the cost of the huge project.

Seasonal flooding of the Yangtze River has been a major cause for concern for the people afflicted by the natural disaster for **(28) countless** years. The Yangtze River is the third longest river in the world, snaking 6,357 km across Asia.

The Three Gorges Dam was engineered to serve three main purposes; flood control, hydroelectric power production and navigation improvement, which some believe, is also a great advantage of having the dam.

Engineers needed 510,000 tons of steel to construct the dam. To put that in **(29) perspective** with the same resources you could build in excess of sixty different Eiffel Towers. The dam reservoir is about 660 km in length and 1.12 km in width. The dam was operational by 2009, but continuous adjustments and additional projects are still ongoing.

The Three Gorges Dam is massive. So much so that it has slowed the rotation of the earth. When the dam is at its maximum, the reservoir holds 42 billion tons of water. A shift in mass that size does affect Earth, increasing the length of a day by 0.06 microseconds.

The project is one of the largest construction projects ever undertaken but is **(30) surpassed** by the Great Wall of China which was completed over a period of 2000 years.

The dam, which sits near two major fault lines, has also been blamed for a **(31) surge** in earthquakes in the region. Scientists argue that the weight of the large reservoir and the seeping of water into the rocks underneath can trigger earthquakes in regions already under considerable tectonic stress.

According to a study from the China Earthquake Administration, in the six years after the reservoir was filled in June 2003; 3,429 earthquakes were recorded along the reservoir; only 94 earthquakes were recorded from January 2000 to May 2003.

Despite helping China reduce its carbon emissions immensely, there is continued debate over the social and ecological consequences of the Three Gorges Dam. A statement by the Chinese State Council said that *'While the Three Gorges project provides huge comprehensive benefits, there are urgent problems that need to be addressed, such as stabilizing and improving living conditions for relocated people, protecting the environment, and preventing geological disasters'*.

Although the Three Gorges Dam tends to attract negative attention, there have been some noticeable positive benefits of using the dam and it will remain one of the largest projects undertaken by man.

- 26**    **A)** liberate  
         **B)** increase  
         **C)** restrict  
         **D)** release



- 27 A) constructive  
B) expected  
C) unachievable  
D) workable
- 28 A) endless  
B) limited  
C) calculable  
D) should not be counted
- 29 A) angle  
B) scene  
C) panorama  
D) context
- 30 A) overshadowed  
B) improve upon  
C) outrun  
D) fallen behind
- 31 A) decline  
B) roll  
C) rise  
D) decrease
- 32 **Which of the following statements is true?**  
A) The Great Wall of China is longer but was a smaller project than the Three Gorges Dam.  
B) The Yangtze River is the third largest river in Asia.  
C) The dam was finished in 2009 and no further work is needed.  
D) The Three Gorges Dam isn't as wide as it is long.
- 33 **How much steel was used to build the Three Gorges Dam?**  
A) Enough to build almost 60 different Eiffel Towers.  
B) Enough to construct more than 60 new Eiffel Towers.  
C) Just a little less than half a million tons.  
D) More than what has been used in any other project.

- 34 According to a study\_\_\_\_\_.
- A) there were 3,429 earthquakes along the reservoir in 2003
  - B) only 94 earthquakes were recorded from 2000
  - C) there number of earthquakes recorded before 2003 was significantly lower
  - D) there has been an increase in the number of earthquakes since the project started
- 35 Why is the Three Gorges Dam still being debated?
- A) Because of the number of issues it still raises.
  - B) Because of the reduction in carbon emissions.
  - C) Because it is one of the biggest projects undertaken by man.
  - D) Because of the cost of the project.

Complete the sentences with the word that is spelt correctly. Choose **A**, **B** or **C**



- 36 When something is essential we say it is \_\_\_\_\_.
- A) indispensable
  - B) indespensable
  - C) indispensable
- 37 I don't like the way she hides a lot of information. She is not very \_\_\_\_\_.
- A) transparrant
  - B) transparant
  - C) transparent
- 38 The conditions on the boat were very \_\_\_\_\_ and we didn't enjoy the trip.
- A) crambed
  - B) cramped
  - C) crampet
- 39 I have never wanted a \_\_\_\_\_ pet, I much prefer normal sized ones.
- A) miniature
  - B) miniture
  - C) miniatur
- 40 He says he only listens to \_\_\_\_\_ music. I think he is just a snob.
- A) soffisticated
  - B) sofhhisticated
  - C) sophisticated