

Listening and Reading

Time: 1 hour 15 minutes

LISTENING

Task 1

For items **1-10** listen to the interview with a woman engineer and decide whether the statements (**1-10**) are **TRUE (A)**, or **FALSE (B)** according to the text you hear. You will hear the text **TWICE**.

1. Lindsey became an engineer to improve the world.
A. True **B. False**
2. Lindsey believes engineering deals with proposing new theories.
A. True **B. False**
3. There were quite a few female students in the mechanical engineering department.
A. True **B. False**
4. Lindsey felt uncomfortable at the university at the beginning.
A. True **B. False**
5. Lindsey started her career in a car manufacturing industry.
A. True **B. False**
6. Lindsey worked on military aircraft before her present job.
A. True **B. False**
7. At present Lindsey spends most of her time doing tests.
A. True **B. False**
8. It was not easy for Lindsey to be the boss of a male team.
A. True **B. False**
9. Lindsey likes engineering because it is well paid.
A. True **B. False**
10. Lindsey wants there to be more female engineers.
A. True **B. False**

Task 2

For items **11-15** listen to the dialogue. Choose the correct answer (**A, B** or **C**) to answer questions **11-15**. You will hear the text **only ONCE**.

11. Richard is

- A. a traveler.
- B. a journalist.
- C. the editor of a newspaper.

12. Richard was NOT interested in

- A. South America.
- B. Arab countries.
- C. European countries.

13. Richard is bilingual in English and

- A. Spanish.
- B. Portuguese.
- C. Arabic.

14. The hardest question for Richard was about

- A. his further qualifications.
- B. the qualities of a foreign correspondent.
- C. the articles he had written.

15. Richard goes to the gym

- A. three times a week.
- B. two times a week.
- C. once a week.

INTEGRATED LISTENING AND READING

Task 3

Read the abstract of a critical review below, then listen to part of an interview with the author of the review. You will notice that some ideas coincide and some differ in them. Answer questions **16-25** by choosing **A** if the idea is expressed in **both** materials, **B** if it can be found **only in the reading text**, **C** if it can be found **only in the audio-recording**, and **D** if **neither** of the materials expresses the idea.

Now you have **7 minutes to read the text.**

Megacities and Atmospheric Pollution

ABSTRACT

About half of the world's population now lives in urban areas because of the opportunity for a better quality of life. Many of these urban centers are expanding rapidly, leading to the growth of megacities, which are defined as metropolitan areas with populations exceeding 10 million inhabitants. These concentrations of people and activity are exerting increasing stress on the natural environment, with impacts at urban, regional and global levels. In recent decades, air pollution has become one of the most important problems of megacities. Initially, the main air pollutants of concern were sulfur compounds, which were generated mostly by burning coal. Today, photochemical smog—induced primarily from traffic, but also from industrial activities, power generation, and solvents—has become the main source of concern for air quality, while sulfur is still a major problem in many cities of the developing world. Air pollution has serious impacts on public health, causes urban and regional haze, and has the potential to contribute significantly to climate change. Yet, with appropriate planning, megacities can efficiently address their air quality problems through measures such as application of new emission control technologies and development of mass transit systems.

This review is focused on nine urban centers, chosen as case studies to assess air quality from distinct perspectives: from cities in the industrialized nations to cities in the developing world. While each city—its problems, resources, and outlook—is unique, the need for a holistic approach to the complex environmental problems is the same. There is no single strategy in reducing air pollution in megacities; a mix of policy measures will be needed to improve air quality. Experience shows that strong political will coupled with public dialog is essential to effectively implement the regulations required to address air quality problems.

Mario J. Molina and Luisa T. Molina
Massachusetts Institute of Technology, Cambridge,
Massachusetts

Now listen to part of an interview with the author of the book and then do the tasks (questions 16-25), comparing the text above and the interview. You will hear the interview TWICE.

- 16 Some people are allergic to the pollutants in megacities.
- 17 A megacity is a large urban area with a population over 10 million people.
- 18 The term *megacity* doesn't have an exact definition.
- 19 There are 9 megacities in the world.
- 20 Air pollution has serious harmful effects on the health of the population.
- 21 Sulfur and smog are the main problems in the developed world.
- 22 The problem of megacities and air pollution is both a regional and global issue.
- 23 Pollutants have different physical properties.
- 24 The world needs a common strategy to reduce air pollution in megacities.
- 25 Political measures may help to improve the situation in megacities.

READING

Task 4

Read the text and answer questions **26-40** below.

An overthinker? That's who I am!

Examining every aspect of a question can be exhausting, but the most amazing insights can be gained that way.

(A) The first time I remember someone telling me not to overthink was when I had my first son. “Don’t overthink it,” said my friend, “just go with it.” “Just going with it” is not something I do. I have to really understand what I’m doing and then I think through almost every possibility and eventuality, like a mind map on nootropics. At every second, my neurons are firing signals in a million different directions. My brain constantly races, not necessarily stressfully, but it’s like my thoughts never rest. I cannot let it go, because I’m convinced that if I just run over the details a few more times, I’ll finally uncover some new understanding of the situation or it will somehow change the outcome. And, for myself it’s normal thinking.

(B) Of course, it doesn’t take a genius to realise that my overthinking, like most things, probably started in childhood. I had a loving, noisy but at times unpredictable childhood. Dinner was always on the table at the same time, and it was always delicious. My mother and father were always, physically, where they said they would be. But I grew up in a house where emotions weren’t discussed, they were bottled up, only to explode out in random unpredictable ways – or a silence would ensue for some wrongdoing I had to fathom out entirely all by myself.

(C) I became a natural observer, able to take the temperature of a room, able to watch people’s micro-movements, listen to their language, their tone. This all became second nature to me. Sometimes, today, my children and husband think I’m a mind reader, but of course I’m not. I’ve just observed what’s been said, what’s gone on, and I’ve overthought what they might do, or say. So sometimes I answer a question before they ask it and they think I have a superpower.

(D) It maybe didn’t help that, straight out of school, I joined the military, where you had to think not once, but several times about the simplest task because everything was a potential trap. “Build a model bridge out of these 120 bricks?” Sure, but count the bricks first because they would often not give you the number of bricks they said they would. You must always check the basics. While doing a written exam, someone would come in to give a message to the examiner and afterwards you’d be told to describe that person who just flitted in while you were concentrating on something else. The message there was never let your guard down. I once stunned my examining officer by giving a description of a person so detailed, he had to turn over the A4 page to make notes.

(E) Honestly, I didn’t realise just how much I thought until one day someone at work asked me what I was thinking (as a child I was a natural daydreamer) because I was

quiet. I went through what I'd been thinking about for the past minute and realised it was a different thought for every second. The look of horror on their face said it all. "All that in the last 60 seconds?" "Sure," I said, "what have you been thinking about?" I asked. "Lunch," they answered. And they are all underthinkers.

(F) I do have to be super-careful to have boundaries and give myself time off because burnout is never far away. Because, like all emotions and ways of working, there's a plus and a minus side. Overthinking, gone wrong, can be about anxiety. I consulted Susanna Abse, a psychoanalyst to ask her about that. "People may perseverate or reflect," she said. "It's about whether you are going over and over something in your mind without a resolution or whether you are able to sit back, replay something and learn something useful from it." Abse also said that "in an action-focused world, being a thinker isn't necessarily a bad thing. But ruminating in a way that doesn't lead anywhere may be a sign of anxiety."

(G) The interesting thing is that when I am with people who overthink, I relax. I let them do the thinking for me, and I know they'll never fail me. Just because I know what their thinking is like. This very much looks like delegating, and most likely it is. When I am with underthinkers this leads me to feel uncomfortable, because I sense I am not "safe". So my number one tip is: if you are an overthinker, try not to spend too much time with underthinkers, as you will end up thinking not just for yourself, but for them, too. I tend to prefer travelling alone and definitely try to avoid travelling with underthinkers, or else I end up feeling like I'm leading a school trip.

(H) The next one is taking up yoga. Yes, I used to hate it, too, and anyone who suggested it. Today I can't live a day without it. Then, I also realised repetitive tasks were my friends: this is why running is the overthinker's friend. Knitting is another one. Fairly mindless but absorbing. And also sewing. If you start to get overwhelmed, shorten your focus to the next five minutes and no more, and ask yourself, "What do I need right now?" and then just concentrate on only that single aim. My final top tip is something that never fails to recalibrate me: cold showers. Start slow but try to build up to two to three minutes in less than 15C water. Cold showers have all sorts of other health and psychological benefits, but in those three minutes, I think of nothing else. Heaven.

Questions 26-40

In which part of the text is the following mentioned?

- 26 the amount of thinking done by different people in a given amount of time
- 27 a changed attitude to a physical activity
- 28 the necessity of constant vigilance under any circumstances
- 29 distinctions between seemingly similar thinking processes
- 30 contradictions of a regulated yet erratic lifestyle
- 31 narrowing one's attention span to just one thing
- 32 taking in more than you are supposed to focus on
- 33 mental work considering all prospects and options
- 34 heightened attention to a person's actions and diction
- 35 undisclosed feelings and reactions to one's actions
- 36 the potential negative outcome of overthinking
- 37 craftwork done to unburden one's mind
- 38 aimless thinking leading to apprehension and angst
- 39 the psychological and mental effect of the group
- 40 an extraordinary ability similar to clairvoyance

TRANSFER ALL YOUR ANSWERS TO YOUR ANSWER SHEET

Use of English

Time: 45 minutes

Task 1

For items 1-10, solve the crossword using the definitions of the required word given in brackets. **The first example (0) is done for you.**

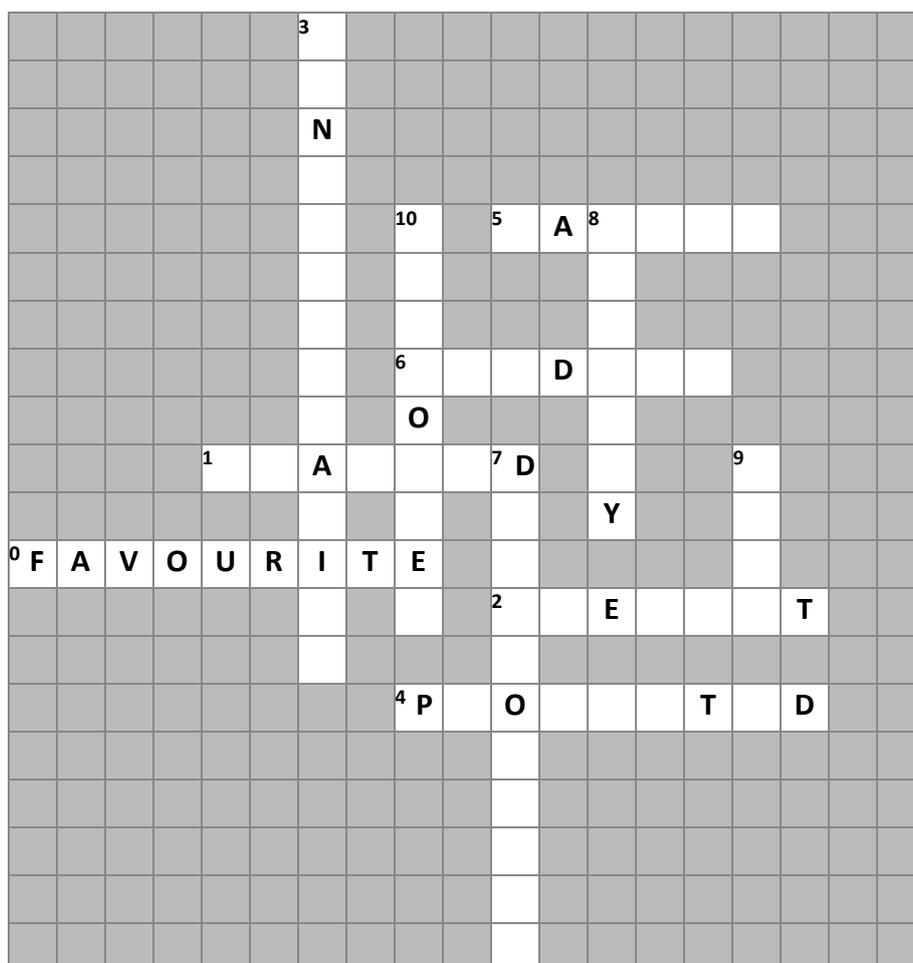
Example: 0. favourite

FAVOURITE SCIENCE FICTION AUTHORS

Top scientists and writers nominate their (0) ... (***a person or thing that you like more than all others***) science fiction authors.

Isaac Asimov, the founding father of modern science fiction, came out as a clear favourite among today's scientists and writers. (1) ... (***taught for a particular job or activity***) as a chemist, Asimov also held a teaching post at Boston University for many years. "Although not as (2) ... (***attractive and showing a good sense of style***) a prose writer as many of his (3) ... (***people who live or lived at the same time as somebody else, especially those who are about the same age***), Asimov was, however, very rigorous scientifically and thoughtful about how he (4) ... (***made a guess about the future based on the given information***) scientific ideas into the future," says Philip Ball, a writer of popular science books. Two works mark Asimov out as the (5) ... (***someone who does something very well***) of the genre: *I, Robot*, and the *Foundation* trilogy. In the *Foundation* series, science and mathematics were used to (6) ... (***to say what you think will happen in the future***) and plan the (7) ... (***the process of growing, changing, or becoming more advanced***) of communities, something which Mark Brake, professor of science communication, thinks may be a touch farfetched, "We often cannot even forecast a flood in a nearby town, let alone how a (8) ... (***a large group of people who live in the same country or area and have the same laws, traditions, etc***) behaves a thousand years in the future. In addition to being an outstanding writer, Asimov knew how to explain the science, and was a (9)

... (**very interested or enthusiastic**) populariser of real science,” says Brake. “What sets him apart is that he was also masterful at documenting human **(10)** ... (**answers or reactions to something that has been said or done**) to scientific progress.”



Task 2

For items 11-20, match the outstanding people in (column 1) with the descriptions of their immense contributions to the world progress (column 2). One description is not needed.

Example 0. has been done for you: 0. F

1	2
<p>0. Adam Smith</p> <p>11. Isambard Kingdom Brunel</p> <p>12. Florence Nightingale</p> <p>13. Ada Lovelace</p> <p>14. Christopher Wren</p> <p>15. Horatio Nelson</p> <p>16. Benjamin Franklin</p> <p>17. Duke of Wellington</p> <p>18. Woodrow Wilson</p> <p>19. George Orwell</p> <p>20. Thomas Jefferson</p>	<p>A. (1820 – 1910) volunteered to nurse soldiers during the Crimean War. Her analysis of mortality rates helped to improve hospital practices. She also helped improve the standard and prestige of the nursing profession. She is considered to be the founder of modern nursing.</p> <p>B. (1758 –1805) English naval commander who died during the Battle of Trafalgar, leading Britain to victory over the French navy – a key moment in the Napoleonic Wars. He had a long and distinguished career, in which he gained a reputation as a master tactician and for his great personal bravery.</p> <p>C. (1632-1723) the greatest English architect of his time. He designed 53 London churches, including St. Paul’s Cathedral, as well as many secular buildings of note. His scientific work was highly regarded by Isaac Newton and Blaise Pascal. He was knighted in 1673.</p> <p>D. (1903 –1950) has proved to be one of the twentieth century’s most influential and thought-provoking writers. He is best known for his novels <i>1984</i> and <i>Animal Farm</i> – which both warn about the dangers of a totalitarian state.</p> <p>E. (1806–59) a British engineer, who played a key role in the early industrial revolution. He built one of the first major railway routes – the Great Western Railway between London and Bristol. He also designed and built steamships and pioneering bridges.</p> <p>F. (1723-1790) a Scottish social philosopher and pioneer of classical economics, who is best known for his work <i>The Wealth of Nations</i> which laid down a framework for the basis of free-market economics.</p> <p>G. (1769 – 1852) Anglo-Irish military commander and British politician. He was the commander of British forces that defeated Napoleon, at the Battle of Waterloo – effectively ending Napoleon’s dominance of Europe.</p>

H. (1821-1912) a nurse in the American civil war, she helped improve treatment of wounded soldiers. After working with the international Red Cross in Europe, she returned to the US where she set up the American Red Cross.

I. (1856-1924) At the end of the First World War, he formulated his 14 points, which sought to create an international League of Nations and institute principles of self-determination and justice as the basis for the armistice.

J. (1706–90) a US politician, writer, and scientist who was involved in writing the Declaration of Independence and the US Constitution. He is also known for writing *Poor Richard's Almanack* and for his numerous inventions.

K. (1743–1826) the author of the Declaration of Independence (1776). He was also a noted polymath with wide-ranging interests from architecture to gardening, philosophy, literature and education. Although a slave owner himself, he sought to introduce a bill to end slavery in all Western territories.

L. (1815-52) an English mathematician, the daughter of poet Lord Byron, has been called "the first computer programmer" for writing an algorithm for a computing machine in the mid-1800s. Because she introduced many computer concepts, she is considered the first computer programmer.

TRANSFER ALL YOUR ANSWERS TO YOUR ANSWER SHEET

Writing

Time: 1 hour 30 minutes

Task 1

A student magazine is running a writing competition. The prize is an adventure weekend in Australia. Readers are invited to send in short stories for a series entitled “Fill your life with adventures, not things”. Your story must include the proverb:

“A journey is best measured in friends rather than miles”.

You decide to take part and submit your own **short story**. Your **short story** must have a title, an exciting plot, a problem to solve, (a) courageous character(s), and direct speech.

Write 250–300 words.