

# 高校英語 長文問題集

全5題＋設問4問＋解答解説／大学入試対策

## 【問題】

### 第1題：環境・気候変動

約220語／基礎レベル

Plastic pollution has become one of the most serious environmental problems in the world today. Every year, more than 8 million tons of plastic enter our oceans, harming marine life and damaging ecosystems. Sea turtles often mistake plastic bags for jellyfish, while seabirds feed plastic particles to their chicks, mistaking them for food.

The problem starts on land. Most ocean plastic comes from rivers, which carry waste from cities and industries to the sea. Single-use plastics, such as bottles, straws, and packaging, make up the largest share of this waste. These products are designed for convenience but used for only a few minutes before being thrown away.

Solutions exist, but they require collective action. Many governments have begun to ban single-use plastics or charge fees for plastic bags. Companies are developing biodegradable alternatives. Individuals can reduce their plastic use by carrying reusable bags, bottles, and containers.

However, technology alone cannot solve this crisis. We need a fundamental shift in how we view convenience and waste. The solution lies not in producing more eco-friendly products, but in producing less waste in the first place. The future of our oceans depends on the choices we make today, in our homes, our communities, and our governments.

問1 According to the passage, why do sea turtles eat plastic bags?

- ① They are hungry.
- ② They mistake them for jellyfish.
- ③ They want to clean the ocean.
- ④ They cannot see them.

問2 What is the main source of ocean plastic according to the passage?

- ① Cruise ships
- ② Industrial dumping
- ③ Rivers carrying waste
- ④ Beachgoers

問3 What does the author argue is the most important solution?

- ① New technology
- ② Biodegradable products
- ③ Reducing waste production
- ④ Government laws

問4 The phrase "fundamental shift" in the last paragraph means:

- ① Small change
- ② Basic transformation
- ③ Geological movement
- ④ Industrial revolution

## 第2題：AI・テクノロジー

約280語／標準レベル

Artificial intelligence is rapidly transforming the way we learn. From personalized tutoring systems to automatic grading tools, AI is being integrated into classrooms around the world. Supporters argue that AI can provide every student with individualized attention, something traditional teachers cannot always offer due to large class sizes.

One major advantage is adaptability. AI-powered learning platforms can analyze a student's strengths and weaknesses in real time, then adjust the difficulty of questions accordingly. This means that each learner progresses at their own pace, neither held back by faster classmates nor left behind by slower ones. Studies in several countries have shown that students using AI tutors improve their test scores by an average of 15 percent compared to those receiving traditional instruction.

Critics, however, raise important concerns. They worry that excessive reliance on AI may weaken students' ability to think critically and solve problems independently. When an algorithm provides instant answers, learners may lose the patience required for deep thinking. Furthermore, AI systems are often trained on biased data, potentially reinforcing existing social inequalities rather than reducing them.

Privacy is another major issue. AI platforms collect vast amounts of personal data, including learning patterns, behavioral responses, and even emotional reactions. Without proper protection, this information could be misused or stolen.

The future of AI in education will likely depend on finding the right balance. AI should support rather than replace human teachers. Technology can handle routine tasks, freeing teachers to focus on creativity, mentorship, and emotional support — things only humans can truly provide. The goal is not a classroom run by machines, but a partnership between technology and humanity.

問1 What is the main advantage of AI tutoring according to the passage?

- ① Lower cost
- ② Adaptive difficulty
- ③ Better grades
- ④ Less homework

問2 By how much do students using AI tutors improve their test scores?

- ① 5 percent
- ② 10 percent
- ③ 15 percent
- ④ 25 percent

問3 What concern does the author mention regarding biased data?

- ① It costs more.
- ② It reinforces existing social inequalities.
- ③ It is illegal.
- ④ It is hard to fix.

問4 What is the author's overall stance on AI in education?

- ① Total replacement
- ② Complete rejection
- ③ Balanced partnership
- ④ Government control

### 第3題：社会経済・働き方

約330語／共通テスト相当

The COVID-19 pandemic dramatically accelerated the global shift toward remote work. What was once considered a privilege for select industries has become a standard practice for millions of professionals. Years after the pandemic ended, many companies continue to offer remote or hybrid work arrangements, fundamentally changing how, where, and when we work.

The benefits of remote work are well documented. Employees report improved work-life balance, reduced commuting stress, and greater flexibility in managing personal responsibilities. Studies suggest that productivity often increases when workers can choose their environment, free from typical office distractions. Companies, in turn, save money on office space and can hire talent from anywhere in the world, breaking down geographical barriers.

However, remote work also presents challenges that are becoming increasingly visible. Many employees, especially younger workers, miss the spontaneous interactions that drive creativity and team bonding. Mentorship suffers when junior staff cannot observe experienced colleagues handling complex situations. Some report feeling disconnected from company culture, leading to higher turnover rates.

Mental health is another significant concern. The line between work and personal life has blurred for many remote workers. Without the physical separation of an office, employees often work longer hours and find it difficult to mentally disconnect at the end of the day. Studies indicate that remote workers report higher levels of burnout than their office-based counterparts.

The most successful companies are now experimenting with hybrid models, combining the focus of remote work with the connection of in-person collaboration. Some require team members to gather at the office two or three days per week. Others organize quarterly retreats to maintain personal relationships and shared culture.

Ultimately, the future of work is unlikely to return to pre-pandemic norms. The challenge for organizations and individuals alike is to design work arrangements that capture the best of both worlds: the autonomy of remote work and the human connection of shared physical spaces.

問1 According to the passage, what change has happened with COVID-19?

- ① Remote work decreased.
- ② Remote work has spread.
- ③ Remote work was banned.
- ④ Office work increased.

問2 What is mentioned as a benefit for companies?

- ① Higher salaries
- ② Reduced office costs
- ③ More holidays
- ④ Lower productivity

問3 What is described as a challenge of remote work?

- ① Lower pay
- ② Lack of mentorship
- ③ Travel costs
- ④ Office rent

問4 What is the author's view of the future of work?

- ① Pure remote work
- ② Pure office work
- ③ Hybrid models
- ④ Four-day weeks

## 第4題：心理学・脳科学

約360語／私大上位レベル

For centuries, sleep was considered a passive state — a time when the brain simply rested. Recent neuroscience research, however, reveals that sleep is one of the most active and essential periods for cognitive function. Far from being a waste of time, sleep plays a critical role in consolidating memory, processing emotions, and clearing harmful waste from the brain.

During sleep, the brain undergoes distinct cycles, each serving different purposes. In rapid eye movement (REM) sleep, the brain processes emotional content and integrates new information with existing knowledge. Deep non-REM sleep, on the other hand, is when memory consolidation occurs most strongly. During this stage, neural connections formed during the day are strengthened, while irrelevant information is gradually filtered out.

A landmark 2013 study published in *Science* discovered that the brain has a specialized waste-clearance system, called the glymphatic system, which is roughly ten times more active during sleep than during waking hours. This system removes toxins, including beta-amyloid — a protein associated with Alzheimer's disease. Researchers now believe that chronic sleep deprivation may significantly increase the risk of neurodegenerative diseases later in life.

The implications for students are striking. Pulling all-nighters before exams may actually reduce academic performance, not improve it. Without sleep, newly learned information cannot be effectively transferred to long-term memory. Studies show that students who sleep seven to nine hours regularly score higher on tests than those who sacrifice sleep to study more.

Sleep also affects creativity and problem-solving. Many famous scientists and artists have reported breakthrough ideas occurring after rest, suggesting that the unconscious mind continues working on problems during sleep. The composer Paul McCartney famously claimed that the melody for *Yesterday* came to him in a dream.

Despite this evidence, modern society often treats sleep as expendable. Many people view sleep deprivation as a sign of dedication or productivity. This cultural attitude, scientists argue, is fundamentally misguided. Prioritizing sleep is not laziness — it is one of the most important investments anyone can make in their long-term health, cognitive abilities, and overall well-being.

問1 What is the function of REM sleep mentioned in the passage?

- ① Filtering irrelevant information
- ② Processing emotions and integrating new information
- ③ Producing dreams
- ④ Restoring physical energy

問2 What is the glymphatic system?

- ① A part of the immune system
- ② A waste-clearance system in the brain
- ③ A digestive system
- ④ A respiratory system

問3 What does the author imply about all-nighters before exams?

- ① They improve performance.
- ② They are necessary for top students.
- ③ They actually reduce academic performance.
- ④ They affect only young students.

問4 What is the author's overall message?

- ① Sleep is a waste of time.
- ② Sleep is essential for cognitive health.
- ③ Sleep is for the lazy.
- ④ Sleep is a cultural product.

## 第5題：文化・歴史

約400語／国公立2次相当

The Japanese tea ceremony, known as chanoyu or sado, is far more than the simple act of drinking tea. It is a centuries-old cultural ritual that embodies fundamental values of Japanese aesthetics, spirituality, and social harmony. To outside observers, the ceremony may appear formal and complex, with prescribed gestures, specific utensils, and carefully arranged surroundings. To practitioners, however, every detail carries meaning that connects the participants to nature, to history, and to one another.

The roots of the tea ceremony stretch back to the ninth century, when Buddhist monks brought tea to Japan from China. Over the following centuries, drinking tea evolved from a medical practice into a meditative one. The most influential figure in shaping the modern tea ceremony was Sen no Rikyu, a sixteenth-century tea master who served the warlord Toyotomi Hideyoshi. Rikyu emphasized four principles still taught today: harmony, respect, purity, and tranquility.

Each tea gathering takes place in a specially designed tearoom, often built with rough natural materials and intentionally small dimensions. Guests enter through a low entrance called the nijiriguchi, requiring them to bow as they crawl in. This physical act symbolizes leaving social distinctions outside; inside the tearoom, all participants are considered equal, regardless of wealth or status.

The aesthetic philosophy underlying the ceremony is wabi-sabi, an appreciation of imperfection and impermanence. The bowls used for serving tea are often handmade, irregular, and slightly asymmetrical — a stark contrast to the perfect symmetry valued in many other cultures. A scratch or crack in a tea bowl is not considered damage but rather evidence of the bowl's history, adding to its beauty.

Time itself is treated differently during the ceremony. Movements are deliberately slow, with extended pauses between actions. The host may spend several minutes simply preparing one bowl of tea, treating each motion as an act of meditation. Guests sip their tea silently, focusing entirely on the present moment. In a world increasingly dominated by speed and efficiency, the tea ceremony offers a radical alternative — a deliberate practice of stillness and attention.

Today, the tea ceremony continues to evolve. Modern practitioners include not only traditional masters but also corporate executives seeking mindfulness training and young people exploring their cultural heritage. Whether performed in a traditional tearoom or a modern apartment, the essence remains unchanged: a single bowl of tea, shared between people, becomes a window into a deeper way of being.

問1 Who was Sen no Rikyu?

- ① A Buddhist monk
- ② A sixteenth-century tea master
- ③ A Chinese emperor
- ④ A modern teacher

問2 Why must guests crawl through the nijiriguchi?

- ① To show humility and equality
- ② To save space
- ③ To hide from enemies
- ④ For exercise

問3 What is the philosophy of wabi-sabi?

- ① Perfection and symmetry
- ② Imperfection and impermanence
- ③ Speed and efficiency
- ④ Wealth and status

問4 What is the author's overall message about the tea ceremony?

- ① It is becoming outdated.
- ② It is only for the wealthy.
- ③ It offers a meaningful alternative to modern life.
- ④ It is too complex to learn.

**【解答】****第1題：環境・気候変動**

問1 ② **They mistake them for jellyfish.**

Sea turtles often mistake plastic bags for jellyfish.

問2 ③ **Rivers carrying waste**

Most ocean plastic comes from rivers.

問3 ③ **Reducing waste production**

The solution lies in producing less waste in the first place.

問4 ② **Basic transformation**

fundamental=根本的、shift=変化。よって basic transformation。

**第2題：AI・テクノロジー**

問1 ② **Adaptive difficulty**

AI-powered platforms can adjust the difficulty of questions accordingly.

問2 ③ **15 percent**

by an average of 15 percent.

問3 ② **It reinforces existing social inequalities.**

potentially reinforcing existing social inequalities.

問4 ③ **Balanced partnership**

a partnership between technology and humanity.

**第3題：社会経済・働き方**

問1 ② **Remote work has spread.**

accelerated the global shift toward remote work.

問2 ② **Reduced office costs**

Companies save money on office space.

問3 ② **Lack of mentorship**

Mentorship suffers when junior staff cannot observe experienced colleagues.

問4 ③ **Hybrid models**

the most successful companies are now experimenting with hybrid models.

**第4題：心理学・脳科学**

問1 ② **Processing emotions and integrating new information**

In REM sleep, the brain processes emotional content and integrates new information.

問2 ② **A waste-clearance system in the brain**

the brain has a specialized waste-clearance system, called the glymphatic system.

問3 ③ **They actually reduce academic performance.**

Pulling all-nighters may actually reduce academic performance.

問4 ② **Sleep is essential for cognitive health.**

Prioritizing sleep is one of the most important investments.

## 第5題：文化・歴史

## 問1 ② A sixteenth-century tea master

Sen no Rikyu, a sixteenth-century tea master.

## 問2 ① To show humility and equality

symbolizes leaving social distinctions outside; all participants are considered equal.

## 問3 ② Imperfection and impermanence

wabi-sabi, an appreciation of imperfection and impermanence.

## 問4 ③ It offers a meaningful alternative to modern life.

the tea ceremony offers a radical alternative.