

1限

英語

— 2月8日 —

解答はすべて解答用紙に記入して提出しなさい。

次の英文を読み、問1、問6、問8、問9、問11は問い合わせに答え、問2～問5、問7、問10は文を完成させなさい。
答えは最も適切なものを、それぞれA～Eの中から一つ選びなさい。問12は指示に従ってTかFを選びなさい。

When we imagine the primary causes of environmental damage, we tend to focus on our cars, the food that we eat, and other things we consume. Surprisingly, however, the construction, maintenance, and operation of buildings is the largest contributor to global carbon emissions, at 39%. This includes the production and transportation of construction materials and the energy consumption needed to maintain buildings. Since the mid-1800s, global urbanization has increased, resulting in the rapid development of cheap urban housing, which has been detrimental to both the environment and to our well-being. The environmental and health-related harm done could be curbed by returning to traditional principles of sustainable building and design that have been used for thousands of years.

Following traditional principles can help societies maintain a delicate equilibrium between built and natural environments. One example is the ancient Chinese practice of *feng shui**, which aims to create habitable and sustainable spaces in harmony with nature. *Feng shui* practitioners recommend that buildings be a comfortable distance from busy roads, rivers, and the surrounding natural area. In addition to this, other pre-industrial** building design elements responded to specific local climate challenges. In Tonga, houses traditionally had curved roofs that deflected the wind from tropical storms common in the region. Similarly, in pre-industrial Norway, living grass roofs provided protection against the area's harsh winters without consuming energy like modern heating systems do. Although not the norm these days, examples of these traditions still exist.

Traditional building principles are also closely linked to the natural features of the land. For example, in terms of draining excess rainwater from the land in ancient Rome, rainwater catchment systems on the ground were used to collect water that ran down from roofs. Thus, damage to buildings was reduced, and the recycled water could be used in homes, in addition to supplementing the city's water supply. The natural features of the land also influenced the way that a building was placed. Various pre-industrial societies made considerations for providing natural daylight. In traditional Persian architecture, courtyards were used to allow more natural light into a greater number of rooms. To best allow for natural heating and cooling, rooms with south-facing windows were used in the winter, while those with north-facing windows were favored in the summer. Incorporating more natural daylight in modern building design would reduce our dependence on electric power and combat carbon emissions. [1]. medical studies have shown that increasing the amount of natural light at home and in the workplace also improves people's health and energy levels.

Temperature moderation is another factor about which traditional principles have something to teach us. In pre-industrial architecture, this was achieved through the choice of appropriate materials, especially those that were locally available and relatively cheap. For instance, for centuries, the Kassena people from Burkina Faso in Africa constructed buildings with walls made from packed mud, which was readily accessible. The walls heated slowly during the day and then radiated warmth during the cooler nights. For the same reason, the Anasazi people in the southwestern United States made their buildings primarily with stone from the local area. Examples of these types of buildings can still be found there. Color was also an important consideration in hot climates. Houses on the Greek island of Santorini have traditionally been painted white primarily to cool the buildings' interiors. At the

beginning of the 20th century, limestone found on the island began to be added to the white paint, giving it antibacterial properties. In the 1930s, the Greek government made it a legal requirement for all houses to be painted with limestone to combat cholera***, improving the health and well-being of the residents.

Ultimately, “greening” the built environment is about reducing carbon emissions and improving our health and well-being. While short-term profits for builders and low prices for consumers are important to land developers, creating habitable buildings in harmony with the surrounding environment using locally-sourced, appropriate materials will prove to be cheaper in the long run. For this to happen, we need to challenge existing construction conventions and follow traditional sustainable building and design principles.

(B)

feng shui*: 風水 **pre-industrial: 産業革命前の *cholera: コレラ

問1 According to the first paragraph, which statement is true?

- ア. The food industry is the biggest emitter of carbon dioxide.
- イ. Cheaply-made housing became more available with the rise of global urbanization.
- ウ. Traditional building methods were more harmful than modern ones.
- エ. Transporting building materials accounts for 39% of global carbon emissions.

問2 In the first paragraph, detrimental is closest in meaning to _____.

(A)
ア. decisive イ. dismissive ウ. damaging エ. demanding

問3 The second paragraph suggests that _____.

- ア. traditional societies were unable to protect their buildings from the environment
- イ. the design of traditional Tongan houses made them vulnerable to tropical storms
- ウ. in following *feng shui* guidelines, planners should build houses near highways
- エ. construction materials have been chosen to overcome specific climate challenges

問4 According to the third paragraph, the ancient Romans _____.

- ア. protected buildings from the harmful effects of rainwater
- イ. increased the amount of water absorbed into the ground
- ウ. stored excess rainfall on the roofs of certain buildings
- エ. had little need for recycling rainwater in urban areas

問5 According to the third paragraph, natural light in a building _____.

- ア. affects people's well-being in a positive way
- イ. increases its need for electrical power
- ウ. requires that the windows face one direction
- エ. disrupts natural temperature regulation

問6 Which of the following best replaces [1] in the third paragraph?

ア. In contrast イ. After all ウ. However エ. Additionally

問7 According to the fourth paragraph, _____.

ア. packed mud was difficult for the Kassena to find in the area
イ. packed mud moderated temperatures inside buildings in the southwestern U.S.
ウ. stone was used by the Anasazi because it was locally available
エ. stone was the preferred construction material for buildings in Burkina Faso

問8 According to the fourth paragraph, which statement is NOT true about the houses in Santorini in the 1930s?

ア. Residents were required to have them painted with limestone.
イ. Limestone that was used in the white paint came from Santorini.
ウ. Cooler temperatures inside were achieved by painting them white.
エ. The color they were painted prevented the spread of cholera.

問9 Which statement best summarizes the content of the final paragraph?

ア. A goal of builders is to make more money for themselves.
イ. We can apply traditional ideas to the building industry for sustainability.
ウ. Clients do not want to pay too much for a building.
エ. Lowering carbon emissions results in a greener built environment.

問10 In the final paragraph, conventions is closest in meaning to _____.

ア. practices イ. meetings ウ. structures エ. obstacles

問11 Which would be the best title for the passage?

ア. The Challenges of Historical Buildings
イ. Sustainable Building and Design Matters
ウ. The Art of Modern Building
エ. Profits in the Construction Industry

問12 According to the passage, mark "T" if the statement is true and mark "F" if the statement is false.

1. Traditional Norwegian houses had curved roofs to protect against storms.
2. Sustainable building and design principles include taking natural land features into consideration.
3. Courtyards allowed Persians to control the amount of heat and light in their buildings.
4. The Kassena and Anasazi people constructed their homes using limestone.

2

次の1～10の英文の空所に入る最も適切な語(句)を、それぞれア～エの中から一つ選びなさい。

1. I think I've heard that somewhere before; which movie () from?

ア. was taken that quote イ. that quote was taken
ウ. that quote taken was エ. was that quote taken

2. Let's go to the supermarket after class and do some shopping for the Halloween party. ()?

ア. shall we イ. will you ウ. can you エ. may we

3. The first student had to present on her own because her partner () what time the class started.

ア. has forgotten イ. is forgetting ウ. will forget エ. had forgotten

4. They have three children: one is twelve years old, one is ten, and () is eight.

ア. the others イ. other ウ. the other エ. another

5. George usually checks each step of a YouTube recipe video two or three times () cooking dinner.

ア. during イ. while ウ. between エ. as

6. Over the years, I've studied German, Thai, and Arabic; I would rather () a new language at my age.

ア. not learning start イ. learning not start ウ. start learning not エ. not start learning

7. The main goal of the committee was to raise funds and () the state's highways.

ア. beauty イ. beautify ウ. beautifully エ. beautiful

8. My nephew, who has just turned five, () my sister when she was young.

ア. resemble イ. was resembling ウ. resembles エ. is resembling

9. I just love potato chips; I've been known () an entire giant bag at once!

ア. have eaten イ. eating ウ. was eating エ. to eat

10. I got tired of there () so many functions to learn every time we bought an appliance.

ア. are イ. being ウ. were エ. be

次の1～10の英文を読み、下線部の意味に最も近い語(句)を、それぞれA～Eの中から一つ選びなさい。

1. Students in these two categories are ineligible for this particular scholarship.
ア. cannot remember イ. cannot research ウ. cannot receive エ. cannot repeat
2. As the lions slowly approached the herd, several of the gazelles fled the area.
ア. caused イ. described ウ. noticed エ. escaped
3. Mr. Hwang is definitely an asset to the shipping department.
ア. beneficial イ. superior ウ. fascinating エ. kind
4. The labor unions reproached the president because of her economic policies.
ア. funded イ. advised ウ. criticized エ. elected
5. You can see bowing in many places in East Asia; this custom is not peculiar to Japanese people.
ア. acceptable イ. relevant ウ. known エ. unique
6. In 2013, the research team made a breakthrough, which they immediately reported.
ア. presentation イ. discovery ウ. mistake エ. tool
7. The audience was spellbound as the ballerina danced gracefully around the stage.
ア. classically イ. elegantly ウ. tirelessly エ. joyfully
8. Although the ministry is working on a long-term plan, our government is still facing monetary challenges.
ア. social イ. educational ウ. legal エ. financial
9. You will need to rewrite your report because you omitted some details.
ア. left out イ. brought up ウ. disagreed with エ. came across
10. Stephanie has the distinction of being the only person from her state to have won that prize.
ア. opportunity イ. power ウ. honor エ. question

4

次の2つの会話文を読み、1, 3, 5, 6, 8は意味・内容に合うように文を完成させ、2, 4, 7は問い合わせに答えなさい。答えは最も適切なものを、それぞれA～Eの中から一つ選びなさい。

Sarah: As your agent, I've got some bad news for you, Paul.

Paul: Oh, no. This isn't about my audition for *Broadway Lights* last week, is it?

Sarah: I'm afraid it is: you didn't get the part. I know how hard you tried for this one.

Paul: Yeah, I really did. What happened?

Sarah: Well, Danielle, the audition manager, said that it was obvious that you had a lot of talent, but you weren't a good fit for the role. She said that you might be better on the big screen than on stage.

Paul: Any idea who got the part?

Sarah: Sheldon Mackenzie.

Paul: Aah, that makes sense. He's got a lot more experience on stage than I do. It's frustrating, you know; I miss out on a lot of theater roles because I don't have the experience, but I can't get the experience because I can't get the roles. Actually, I've been thinking of not auditioning for any more stage roles.

Sarah: Listen, I could book you for some TV commercials to get your name out there.

Paul: No thanks; they're too tedious and time-consuming. I've got my work cut out for me in terms of my acting. For one thing, I need to spend a lot more time preparing for auditions, as I haven't acted in a while. I also have to work on memorizing scripts. You know, this is what happened auditioning for *The Moon's End*. Do you remember? I passed the first round and got a callback to come to a second audition.

Sarah: I sure do. You almost got that part. Well, you might think about auditioning for more film work. They really liked that short film *The Fortieth Day* you starred in last year.

Paul: I was just thinking about that this morning. I really enjoyed it, and I know I did a good job. Remember, I acted in a few independent films after college, but I never thought about pursuing it any further.

Sarah: Well, you know that the producer of *The Fortieth Day* is doing a full-length independent feature film next year called *A Former Life*. If I remember right, it's a dark comedy like the short film you did. There'll be a casting call for the actors in the next month or two.

Paul: Wow, that's welcome news! Could you arrange an audition for me, Sarah?

Sarah: I sure can. I'll give Liam a call after lunch and see what I can do.

Paul: Is Liam doing the casting for this? He was also my contact for *The Fortieth Day*. We got along really well. I have a good feeling about this one!

1. When Paul says "I've got my work cut out for me," he most likely means he _____.

ア. has to put in a lot of effort	イ. has not booked any TV commercials
ウ. is unsure about the future	エ. is nervous about performing on stage

2. According to the dialogue, in which production did Paul feature in?

ア. *Broadway Lights* イ. *The Moon's End* ウ. *The Fortieth Day* エ. *A Former Life*

3. According to the dialogue, Paul is hopeful about getting the part for the film Sarah suggests he audition for because _____.

ア. it is a full-length feature film イ. it is a Broadway theater show
ウ. its casting director knows him エ. it will be independently produced

4. According to the dialogue, which statement is NOT true about Paul?

ア. He was satisfied with his performance in *The Fortieth Day*.
イ. He is confused about why Sheldon Mackenzie got the role.
ウ. He plans to spend more time on improving his acting ability.
エ. He was invited to a second audition for *The Moon's End*.

Janice: Ben, do you know what Mandy asked me today? I couldn't believe it: she wants us to pay for her friends and her to go to the Boys 4 Sound concert. She wants to go with Jasmine and Hee-young. Each ticket is 130 dollars. My jaw hit the floor when I heard that!

Ben: A concert? That sounds nice.

Janice: Are you listening? 130. Not 30! 130!

Ben: I was listening. I just don't think it's that big a deal. It's the group's first time in North America! It's been all over the news, so it's kind of a big thing. They're probably worth it!

Janice: That's just too much money. She already has all three of their albums; can't she just listen to those?

Ben: Janice, listen. Don't you remember when you were 17? You got into a fight with your mom about going to that Angry Faces concert. She wasn't going to let you go until your brother stepped in and said that he'd take you.

Janice: That was different. The tickets were only 20 dollars each. And I had a part-time job, so I paid for them myself.

Ben: But it was the fact that it was a goth punk band. Just before we got married, your dad told me all about your obsession with Angry Faces and how it drove them crazy. They couldn't stand you spending money on punk fashion, the music, or the posters you had on your walls.

Janice: What about you? Weren't you into that metal band? What was their name?

Ben: Day-glow Mammoths. And they weren't metal. They were slash metal. Totally different genre!

Janice: Well, did you know the concert is in New Hampton? That's a two-hour drive. I certainly don't want to drive them. The cost of the gas alone! Plus, she'll want T-shirts or some other merchandise. It'll come to over 500 dollars for the evening!

Ben: That's not so bad. You know, her birthday is coming up in two weeks. Instead of getting her a new smartphone like we talked about, why don't we pay for the tickets, instead?

Janice: Okay, fine. In that case, you'll have to either go to the concert with them or hang around somewhere and wait. I can't stand that music.

Ben: Fair enough. I don't mind that band. We should check with her first, though; Mandy might change her mind if she realizes that she's getting an evening with her friends instead of a new phone!

5. When Janice says "My jaw hit the floor," she most likely means she _____.

- ア. was discouraged
- イ. needed to have medical attention
- ウ. was shocked
- エ. needed to rebuild the floor

6. According to the dialogue, Janice is _____.

- ア. enthusiastic about Mandy's wish to go to the concert
- イ. concerned Ben will not go to the concert with her
- ウ. hopeful that Mandy will want to buy souvenirs
- エ. worried that the event is going to be expensive

7. According to the dialogue, what does Ben think about Mandy's request?

- ア. The total cost of the tickets, travel expenses, and T-shirts is too high.
- イ. It is a bad idea because the band's music is terrible.
- ウ. The request is surprising because the group is relatively unknown.
- エ. It is like an experience Janice had with her parents.

8. According to the dialogue, both Mandy's parents _____.

- ア. enjoy listening to her favorite music
- イ. agree to let her go to the Boys 4 Sound concert
- ウ. want her to pay for the concert herself
- エ. plan to go to the band's concert themselves

5

次の問1～問3の英文を読み、話の流れに沿って意味が通るように並べ替えた場合、最も適切なものはどれか。それぞれア～エの中から一つ選びなさい。

問1 1. Three robots called Astrobees are currently assisting astronauts with their work aboard the International Space Station.

2. With these capabilities, the Astrobees are ready to play a vital role in supporting the future exploration of the Moon, Mars, and beyond.

3. They are also equipped with arms that allow them to hold things, as well as cameras and microphones that enable them to “see” and “hear.”

4. Named Bumble, Honey, and Queen, each is shaped like a cube, is 31.75 centimeters wide, and is capable of flying freely around the station.

ア. 1 → 2 → 3 → 4

イ. 1 → 4 → 2 → 3

ウ. 1 → 2 → 4 → 3

エ. 1 → 4 → 3 → 2

問2 1. This process concludes at around the age of 25, but our bones continue to restore themselves throughout our lives.

2. In fact, about 10 percent of our bone is renewed every year, which means that, over the course of each decade of our lives, an entirely new skeleton is formed.

3. This surprising phenomenon occurs because, as we mature, some smaller bones combine to become larger ones, reducing the overall number.

4. A human baby is born with about 300 bones, whereas a human adult has 206.

ア. 4 → 1 → 2 → 3

イ. 4 → 3 → 1 → 2

ウ. 4 → 1 → 3 → 2

エ. 4 → 3 → 2 → 1

問3 1. These include whether gene therapy should be used to alter basic qualities such as height, intelligence, or athletic ability.

2. Gene therapy is a medical technique that seeks to modify the genes inside a person's cells.

3. However, because such therapy involves changing human bodies at the genetic level, it also raises many important moral concerns.

4. It offers the possibility of curing many of humankind's deadliest and most feared diseases, including cancer, diabetes, heart disease, and AIDS.

ア. 2 → 1 → 3 → 4

イ. 2 → 4 → 1 → 3

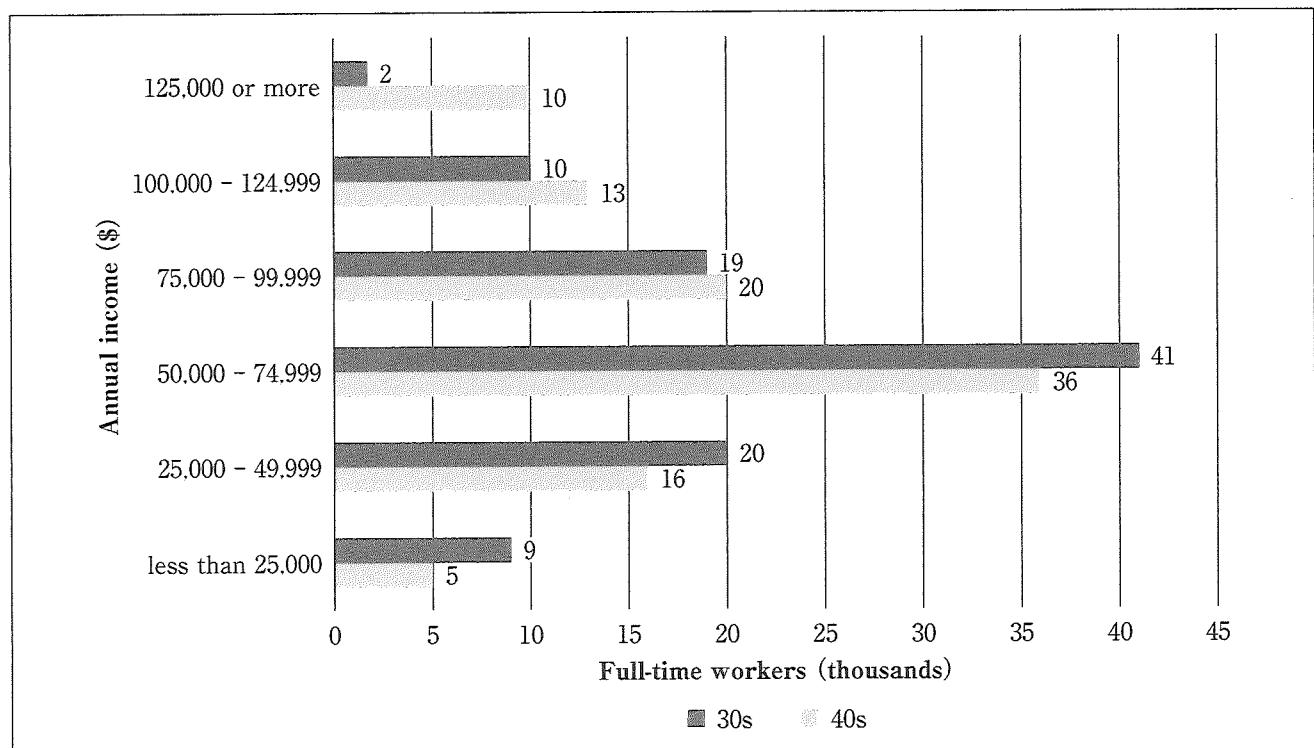
ウ. 2 → 1 → 4 → 3

エ. 2 → 4 → 3 → 1

6

次のグラフを見て、英文の空所(1)～(4)に入る最も適切なものを、それぞれA～Eの中から一つ選びなさい。

Annual Income of Full-time Workers in Country B



―― 上記のグラフは架空のものです――

The above graph shows data on the pre-tax annual income of full-time workers in their 30s and 40s in Country B in 2022. In the highest income range, the number of workers in their 30s was (1) that of workers in their 40s. On the other hand, there were more people in their 30s than in their 40s in (2) of the six income ranges. The difference between the number of workers in their 40s and the number in their 30s was smallest in the (3) income range. There were just under ten thousand workers in their 30s in the (4) income range. If these patterns continue in the future, financial advisers suggest that many people could expect their salaries to increase with age.

(1) ア. one-tenth	イ. one-fifth	ウ. one-quarter	エ. one-half
(2) ア. two	イ. three	ウ. four	エ. five
(3) ア. 25,000 - 49,999	イ. 50,000 - 74,999	ウ. 75,000 - 99,999	エ. 100,000 - 124,999
(4) ア. lowest	イ. second-lowest	ウ. second-highest	エ. highest

