

# 英語 (リーディング)

各大問の英文や図表を読み、解答番号  ~  にあてはまるものとして最も適切な選択肢を選びなさい。

## 第1問 (配点 10)

A You are studying food cultures in the international club at your senior high school. Your teacher asked you to do some research on noodles all over the world. You are reading an article about different kinds of noodle dishes and their health benefits.

Noodle dishes around the world	
 <p><b>Kuay Jab</b></p> <ul style="list-style-type: none"> <li>• Chewy rice noodles in Thailand</li> <li>• Generally not salty</li> <li>• Has fewer calories compared to other noodles.</li> </ul>	 <p><b>Couscous</b></p> <ul style="list-style-type: none"> <li>• Small pasta shaped like rice</li> <li>• Originated from Northern Africa</li> <li>• Should be soaked in water before being cooked.</li> </ul>
 <p><b>Gnocchi</b></p> <ul style="list-style-type: none"> <li>• Italian pasta shaped like a dumpling</li> <li>• Made from potato and wheat, which gives a lot of energy</li> <li>• High amount of vitamin B, which helps body get more energy</li> </ul>	 <p><b>Naengmyeon</b></p> <ul style="list-style-type: none"> <li>• Korean noodles made from potato or sweet potato</li> <li>• A lot of fiber helps lower blood sugar levels.</li> <li>• A lot of fiber also contributes to weight loss.</li> </ul>

問1 If you need to consume a lot of energy, the noodle dish most suitable to eat is .

- ① Couscous
- ② Gnocchi
- ③ Kuay Jab
- ④ Naengmyeon

問2 If you are planning to cut salt on your next meal, you should eat .

- ① Couscous
- ② Gnocchi
- ③ Kuay Jab
- ④ Naengmyeon

**B** You are an exchange student staying at Canterbury City in the UK and visiting the city's official website. On the website, there is an announcement of a naming contest for the city's new building.

## Naming Contest for Canterbury City's new facility complex

The three-story public facility complex will open in front of Canterbury Town Hall next spring. This building will be used for multiple purposes; welfare facilities for the elderly, childcare facilities for young children, and an open space for all citizens. The city asks citizens to name this new building.

### How to participate

◆ To submit your idea for the complex's name, click on the link below and follow the instructions. Entries can be submitted via the web, email or post. (Please fill in your full name, address, age, and telephone number.)

→ [Click here](#)

◆ To look at the blueprint and illustration of the building, click on the link below.

→ [Click here](#)

### Contest schedule

- Names will be accepted from 1 September to 30 September.
- The committee staff will then select five candidates from among all the proposals by 14 October. Those new names for the building will be announced on the city's website within that day.
- From 15 October to 2 November, citizens will vote for the most appropriate name from among the five nominated entries on the city's website.
- The new name will be announced in the press room at Town Hall on 3 November.

### Prizes

All those who submitted the five nominated names will be invited to attend the opening ceremony on 31 March, next year. Each of the five winners is going to receive a "Canterbury City Coupon" worth 100 pounds, which can be used at local stores in the city.

問 1 If you think of a good name for the new building, you can submit it 3.

- ① between 15 October and 2 November
- ② by 14 October
- ③ in September
- ④ on 3 November

問 2 After the ideas for the new building's name are submitted, the citizens will visit the city's website to 4.

- ① fill in their full name, address, age, and telephone number
- ② select five names from among all the proposals
- ③ vote for one from the five names chosen by the city committee
- ④ watch the press conference at Town Hall

問 3 If your submission is chosen as one of the five final winners, 5.

- ① you will be given a free pass to the new building
- ② you will be invited to the new building this autumn
- ③ you will receive a regional coupon worth 100 pounds
- ④ your full name will be announced on the city's website

第2問 (配点 20)

A You have just entered Cornville University in the UK, and are interested in using the gym. You are reading the gym leaflet.

### Cornville University Student Gym

Open: 6 am - 9 pm, Every Day Staff Hours: 6 am - 5 pm, Monday to Friday

Gym Membership: Once you have signed up for a membership, you can use the gym by swiping your membership card at the entrance.

#### Changing Rooms

We have two changing rooms located right next to the entrance. You can use Changing Room A for no additional fee, but you have to bring your own bath towels and soap when you use the showers. If you want to rent the gym's towels and soap, use Changing Room B's shower room for an additional £10 a month.

#### Introduction Classes

Introduction classes are held at 9 am on weekdays. It is a 30 minute-class where you can get to know the gym equipment, facilities, and group fitness classes. If you want to participate, just come to the reception desk at the start of class. Non-members can also participate.

#### Signing Up & Monthly Membership Fee

Students can sign up for a gym membership during staff hours. The membership fee is £50 a month. The first payment is made one month after signing up and the following monthly payment is made accordingly. e.g. If you sign up on 23 March, the first payment of £50 will be made on 23 April.

#### Comments from the Gym Members:

● The gym is very spacious and has a lot of equipment. You can train without waiting for equipment to be available.

● Signing up is easy. You just have to bring your credit card and student ID. It only takes 10 to 15 minutes. In fact, you can use the gym on the day you sign up.

● Changing Room B is the more popular of the two rooms, and some students don't use either of them. I live in the student accommodation, which is next to the gym, so I just head to the gym with my gym clothes on.

● The Gym Café on the second floor is usually crowded in the mornings and the evenings. Lunch hours are the least crowded. You can't bring your food or drinks to the café.

● The introduction classes are helpful if you are interested in group fitness classes. But if you are just planning to use gym equipment and are already familiar with them, then there's no need to attend.

問1  are two things that you can learn about the gym.

A : Both Changing Rooms A and B have a shower room.

B : The gym is next to the student accommodation.

C : You can bring your drinks to the Gym Café.

D : You can sign up for the gym every day.

E : You have to wait for a day to use the gym after signing up.

- ① A and B
- ② A and C
- ③ B and C
- ④ C and D
- ⑤ D and E

問2 To attend an introduction class, you need to .

- ① get a membership card
- ② get used to the gym equipment
- ③ go to the reception desk at 9 am
- ④ make a reservation in advance

問3 To sign up, you need to .

- ① attend the introduction classes first
- ② bring your credit card and student ID
- ③ decide whether to use Changing Room A or B
- ④ use the online registration system

問4 If you become a member of the gym on 1 June and use Changing Room A, the total amount of fee you have paid by 10 August will be .

- ① £100
- ② £120
- ③ £150
- ④ £180

問5 One fact stated by the gym members is that .

- ① introduction classes are beneficial to learn about fitness classes
- ② more students use Changing Room B than Changing Room A
- ③ the Gym Café is most crowded during lunch hours
- ④ the gym doesn't have enough gym equipment for its users

B You are the editor of a school English paper. Bob, an exchange student from the UK, has written an article for the paper.

Do you like spicy food? In general, it is said that 62 per cent of people in the entire world like to eat spicy food and the percentage is expected to rise. You may wonder, what country has the largest number of spicy dishes? India's traditional spicy cuisine, like curry and tandoori chicken, is so popular that you may assume that India has the largest number of spicy foods but that is not the case. Maybe you have guessed China takes the crown as it has one of the oldest histories and Sichuan province known for its red pepper-centred diet. However, it does not beat the number of spicy foods India has. So, what country beats China and India? It is Thailand.

Spice is one of the key ingredients in traditional Thai dishes. According to my research, there are multiple reasons as to why Thailand's food culture consists of many spices.

- Spice improves your health as it can get rid of parasites and bacteria in your body. With Thailand's tropical climate, spice is necessary to avoid food poisoning and stomach aches. If you look at other tropical countries, you will notice that the food culture there consumes a lot of spices, too.
- Spice allows food to stay fresh longer. As you can imagine, in tropical regions with high humidity and warm temperatures, food spoils much faster than in colder areas. Therefore, people add spice, which helps food last longer.
- Spice improves blood circulation, which helps control the body's temperature. When more blood circulates to the skin, it leads to more sweat. As a result, the body temperature decreases. This is vital when living in tropical countries like Thailand.

Such points mentioned above could be seen as benefits of eating spicy foods. However, just like any other foods, eating too much has its disadvantages. We all know eating too much spicy food can leave you with an upset stomach, but it can also make falling asleep difficult. When you need to wake up early the next day, it's best to eat any spicy food on another day.

問 1 Which shows the countries' ranking from **highest to lowest** in terms of the number of spicy foods they have? 11

- ① China - India - Thailand
- ② China - Thailand - India
- ③ India - China - Thailand
- ④ India - Thailand - China
- ⑤ Thailand - India - China
- ⑥ Thailand - China - India

問 2 According to Bob's report, one advantage of adding spice to food is that 12.

- ① it helps you lose weight
- ② it helps your body absorb more nutrients
- ③ it helps your body cool down
- ④ it makes dishes taste better

問 3 The statement that best reflects one finding from Bob's research is 13

- ① 'Hurry and eat spicy food as the peppers tend to spoil quickly.'
- ② 'On hot days, put spice in food to keep it longer.'
- ③ 'The colder the country, the spicier the food.'
- ④ 'The popularity of spicy food is rising, but not for long.'

問 4 Which best summarises Bob's opinion about eating spicy food? 14

- ① Eating spicy food makes you feel better and sleep well.
- ② India, China, and Thailand are the places to go if you want to eat spicy dishes.
- ③ Spicy food has many advantages, but be careful about how much and when you eat it.
- ④ With the rising popularity of spicy foods, it is best to try out a variety of them.

問 5 What is the most suitable title for the article? 15

- ① What country is the spiciest?
- ② What is your favourite spicy food?
- ③ Where did spices come from?
- ④ Why not learn about spicy foods?

第3問 (配点 15)

A You are planning to visit a restaurant in Seattle. You found useful information in the Q&A section of a travel information website.

**I'm wondering if it is worth visiting Kimberley's around July. Would you recommend this restaurant to someone who likes steak? Also, I'm wondering how reasonable the prices are.**

(Stanley)

**Answer**

It depends. There is a dish that may satisfy steak-lovers but sadly they do not serve real steak. The closest dish they have is the Fatty Burger, which is like a steak but with buns and some French fries. It's 30 dollars for two people. It may be a little expensive but the portions are large. If you are a vegetarian, you can change the beef patty to tofu.

However, the restaurant is more known for its seafood dishes. My favorite is the Salmon Steak. The side dishes are three fried oysters. It is 27 dollars for two servings.

If you like something less expensive, try ordering the Pasta Sausage. It's a meal for sausage lovers because the dish is covered in thin sausages that look like spaghetti. There's tomato sauce on top of the sausages. Just one portion is enough for a person and it is only 14 dollars. I usually order this not only because of the price, but because you can even add additional toppings like, olives, mushrooms, and seafood.

(Daniel)

問1 From Daniel's answer, you learn that Daniel 16.

- ① does not recommend the restaurant
- ② has never ordered Fatty Burgers
- ③ is fond of Pasta Sausages
- ④ thinks Fatty Burgers are rather reasonable

問2 According to Daniel's answer, a vegetarian who does not eat any meat or seafood would order 17.

- ① Fatty Burgers
- ② Pasta Sausages
- ③ Salmon Steaks
- ④ All of the above

**B** Your friend Santana has applied to a university and she is going to take an interview test next week. She lets you read the document below she has submitted to the university.

To university staff members

### Letter of application

I am applying to your university for my goal to become a nurse in this town. I want to help sick elderly people, whose number is expected to keep increasing in this area. This spring, I took the university's web seminar for high school students. The staff members in the seminar showed me around the campus facilities as if I were there, using the live camera. The seminar made me realize how much you value the importance of nursing care for the elderly. For this reason, I have chosen to take the nursing course at your university.

When I was eleven, my grandmother had long been in a hospital because of cancer. She had no hope of recovery and got weaker day by day. But thanks to the dedicated care of the nurses, my grandmother was able to live her life in comfort until the last moment. They did everything to relieve her pain and reassured her by talking to her gently. That was the moment I became interested in nursing the elderly. The experience also taught me that nursing is necessary not just for patients who are expected to recover, but for those who cannot be cured.

In high school, I regularly participated in the nursing volunteering activities at a local hospital. As an assistant, I helped the nurses feed the patients, remake the beds, and clean their bodies. I finished the volunteer work there last year. One of the patients told me that I was born to be a nurse, which made me more determined to pursue the field.

I visited your university for the first time on August 1st this year, which is the anniversary of the school opening. The moment I entered the campus and saw some facilities, I fell in love with the atmosphere. I hope to study nursing here and contribute to medicine in this town after graduation.

Sincerely,

*Santana Bilson*

問1 Put the following events (①~④) in the order that happened.

18 → 19 → 20 → 21

- ① Santana attended the university's online seminar.
- ② Santana became interested in nursing the elderly.
- ③ Santana finished her volunteer work at a hospital.
- ④ Santana visited the university for the first time.

問2 Santana's grandmother 22 .

- ① did not receive satisfactory care at hospital
- ② died of cancer after a long hospital stay
- ③ had long been working as a nurse
- ④ survived her cancer thanks to the nurses' help

問3 From this letter, you learn that 23 .

- ① Santana is not confident that she will do well enough in the university
- ② Santana thinks that only saving the patients' life is important
- ③ Santana wants to be a nurse who works internationally
- ④ Santana's volunteer work experience helped her determine her career

第4問 (配点 16)

You are going to visit Azuma with Ann, an exchange student. She has found the following blog articles by two students, Ken and Lynn, and you are reading them to find useful information.

**Welcome to Azuma!**

Posted by Ken, 3:30 p.m., on June 3, 2022

Is this the first time you've visited Azuma? Have you walked along the Azuma Shopping Street yet? The busy street is best for buying some Japanese traditional gifts for your family and friends. This historic town is also famous for its gourmet restaurants. There are many famous restaurants serving Japanese, Western, and Chinese cuisine. I have listed five of my favorite dishes below. I'm quite a big eater, so I chose dishes that are rich in flavor and that fill me up. Especially, I go to eat the steak and *tendon* at least once a week!

<p><b>My Five Favorite Foods in Azuma</b></p>		
	<p>Beef Steak at <b>Grill Sakai</b> 1,500 yen</p>	<p><i>Tendon</i> (fried shrimp on top of rice) at <b>Minoya</b> 900 yen</p>
		
<p>Pork Cutlet at <b>Kitchen K</b> 950 yen</p>	<p>Beef Curry and Rice at <b>Darma</b> 750 yen</p>	<p><i>Ramen</i> Noodles at <b>Torai-ken</b> 850 yen</p>

How about walking to Azuma Tower after having lunch? If the weather is fine, you can see the entire city area from the observation deck. Also, you can do some river cruising on Musashi River from Azuma, and enjoy the view of the city from a different perspective.

**What's in Azuma?**

Posted by Lynn 10:45 a.m., on August 8, 2022

Are you interested in Japanese culture? Among the many things you can do in Azuma, looking at traditional Japanese crafts should be the top priority. At the *Azuma Crafts Museum*, you can see fine traditional craft works made of wood and paper. Also, they hold workshops where you can try making some craft works on your own.

At lunchtime, why don't you try some Japanese food? I most frequently visit the following five restaurants. I've been a regular at these restaurants, and they all know that I'm featuring them on my blog. If you tell the restaurant staff that you have seen my blog, you will receive a 10% discount from the prices below. At Sushi Tatsu and Azuma Teppan, the chefs make the dishes in front of guests. You can enjoy dining with your eyes, too!

**Here are the Best Foods to Eat in Azuma!**

Restaurants	Foods	Prices
Kamameshi Mori	Seafood <i>Kamameshi</i> (pilaf with seafood and vegetables)	1,000 yen
Omura-an	<i>Tempura</i> Noodles (noodles with deep-fried shrimp)	980 yen
Little Azuma	Chicken and Egg Bowl	900 yen
Sushi Tatsu	Hand Roll Seafood Sushi	950 yen
Azuma Teppan	<i>Monjayaki</i> (pan-fried batter mixed with meat, vegetables and stock)	800 yen

If you want to eat a big meal, I recommend Grill Sakai. Their tender and juicy Japanese beef steak was great. I hope you will enjoy food, culture and all about Azuma!

問1 Ken wrote that  were important for him when he chose the dishes he recommended.

- ① healthy meals and good service
- ② high calories and traditions
- ③ large portions and rich flavors
- ④ low prices and good places

問2 Which of the following aspects of Japanese culture does Lynn recommend most?

- ① Festivals and ceremonies
- ② Historical buildings
- ③ Multicultural foods
- ④ Traditional handicrafts

問3 The restaurant that both Ken and Lynn have visited is .

- ① Azuma Teppan
- ② Grill Sakai
- ③ Little Azuma
- ④ Minoya

問4 Which of the following does neither Ken nor Lynn recommend doing?

- ① Cooking
- ② Crafting
- ③ Cruising
- ④ Shopping

問5 You and Ann want to choose the cheapest meal for lunch based on Ken and Lynn's recommendations. (Lynn's blog offers a discount.) The cheapest food of all is . If you want to choose a dish with seafood, the most cheapest one is . (Choose one for each box from options ①~⑥.)

- ① Beef Curry and Rice
- ② Chicken and Egg Bowl
- ③ Hand Roll Seafood Sushi
- ④ *Monjayaki*
- ⑤ *Tempura* Noodles
- ⑥ *Tendon*

## 第5問 (配点 15)

Your group is preparing a poster presentation titled “The Life of John Manjiro,” using information from the magazine article below.

Have you ever heard of a man named John Manjiro? He never called himself that way, but later when his dramatic life was made into a novel, he came to be known as John Manjiro.



Manjiro was born in what is now Kochi Prefecture, as the second son of a poor fisherman. At the age of 14, he was working on a fishing boat, but when a sudden strong wind made the boat uncontrollable, he and the other four crew members were lost. After drifting for several days, they arrived at a deserted island. They managed to survive more than 100 days on the island, and they were lucky to be rescued by an American whaling ship. The other four got off the ship in Hawaii, but Manjiro was the only one to set out for the U.S. mainland, partly because he was favored by the captain and partly because he himself wanted to do so.

After arriving in Massachusetts on the U.S. mainland, Manjiro was raised by the captain as if he were an adopted child. In 1843 he learned English with elementary school children, and the following years he studied mathematics, navigation, and shipbuilding techniques at another school. While he was exposed to positive concepts, such as democracy and gender equality, he also experienced racial discrimination.

For a few years starting in 1846, he worked as a sailor on a U.S. whaling ship, traveling all over the world. During this voyage, he once landed on an island of what is now Okinawa Prefecture and attempted to return to Japan, but was unable to do so. In 1849, he returned to the United States and took a job mining gold in San Francisco. With the money earned from this job, he set out for Japan, and eventually landed in Okinawa again via Hawaii in 1851. He was

questioned for a long period of time because Japan at that time had a system of national seclusion — strictly limiting the entry of foreigners. Later, his English ability was recognized, and he became an English teacher and interpreter for some clans. He was involved in the conclusion of some important treaties in the history of Japan. He also accompanied the Meiji government on its tours to Europe. He spent his later years peacefully as an educator. In 1898, he died at the age of 71.

He is said to have been the first Japanese to formally attend an American school, where he learned English in a unique way. Manjiro pronounced English the way he heard it when he learned it, which was very different from the way many English learners do based on text today. In fact, an experiment has shown that if you speak to an American today according to the pronunciation of Manjiro, it sounds a little fast, but it is close enough to the correct pronunciation for the meaning to be understood. To give an example of the pronunciation in the English dictionary that Manjiro edited, water was pronounced “wara.” Some English conversation schools teach English in a way that is easy for Japanese to pronounce, referring to the pronunciation of Manjiro’s English dictionary.

He was a fisherman, not a samurai, and stayed in the U.S. in his youth without basic knowledge such as Chinese literature. It is said that although he was a good interpreter of spoken English, he was not good at translating written English into Japanese. As a result, he did not have the opportunity to demonstrate his abilities during the Meiji era, when it was necessary to transfer technological knowledge from the West to Japan. In his later years, a friend from his American days visited him, but it is said that he could no longer speak English.

Your presentation notes:

### The Life of John Manjiro

#### ■ Sequence of Key Events



- 30
- 31
- 32
- 33
- 34

#### ■ Manjiro's Life in the U.S.

- Manjiro studied English and other subjects for several years.

• 35

#### ■ Manjiro and English

• 36

• 37

#### ■ Manjiro's Whole Life

Manjiro's life can be described as: 38

問 1 Members of your group listed important events in Manjiro's life. Put the events into the boxes 30 ~ 34 in the order that they happened.

- ① Manjiro and his colleagues were rescued by an American ship.
- ② Manjiro tried to return to Japan, only to fail.
- ③ Manjiro made up his mind to go to the U.S. mainland for the first time.
- ④ Manjiro studied English and some other subjects at school in the U.S.
- ⑤ Manjiro worked as an English interpreter and teacher in Japan.

問 2 Choose the best item for 35.

- ① Manjiro became a miner while studying at school.
- ② Manjiro had a bitter experience as a Japanese.
- ③ Manjiro was adopted and raised by the captain.
- ④ Manjiro was forced to leave the U.S. mainland against his will.

問 3 Choose the best two items for 36 and 37. (The order does not matter.)

- ① Manjiro had a good command of English until his death.
- ② Manjiro learned English pronunciation by imitating how Americans spoke.
- ③ Manjiro studied English by himself without going to school.
- ④ Manjiro was good at translating both spoken and written English.
- ⑤ Manjiro's way of English pronunciation is still made use of in today's education.

問 4 Choose the best item for 38.

- ① filled with trouble and sorrow
- ② full of ups and downs
- ③ happy all through his life
- ④ stable and wealthy

第6問 (配点 24)

A Your study group is learning about “the left-brain dominance and the right-brain dominance.” You have found an article you want to share. Complete the summary notes for your next meeting.

**Left Brain or Right Brain**

Some people consider themselves “left-brained” or “right-brained.” This division of personality is often featured in books or on TV. The brain is the most mysterious organ in the human body, and there is little we understand about how the brain works. According to one theory, however, the left and right sides of the brain control different types of thinking. Also, it suggests that people prefer one type of thinking over the other, and the preference is called “dominance.” Left-brain dominant people are said to be more logical, objective, and good at math. Right-brain dominant people tend to express high creativity and intuition.

The theory that the two sides of the brain have different functions was first proposed by Roger W. Sperry, who won the Nobel Prize in 1981. He studied brain function in patients whose corpus callosum had been cut for treatment. The corpus callosum is in between the left and right sides of the brain, and usually information in each side of the brain communicates through this part. With this path cut, the communication between the two sides of the brain were interrupted.

In Sperry’s study, the split-brain patients saw a word like “nut” with their right eye. Then, they were able to pick up the object from several different objects using their left hand and say the name of the object. When they read a word with their left eye, however, the patients succeeded in picking up the object with their right hand, but they could not say its name. Sperry suggested that language is controlled by the left brain, so the split-brain patients couldn’t speak out the information in the right brain (generally, the left brain controls the right side of body, and the right brain do otherwise). He continued the study and showed that logic, reasoning, and numbers are often processed in the left brain,

while the right brain is more important to handle spatial and visual information.

Today, research has shown that the brain is not as divided as once thought. For example, studies have shown that mathematical abilities are strongest when the two sides of the brain cooperate. Scientists know that the two sides of the brain communicate through the corpus callosum to perform a variety of tasks. The problem with the popular “left-brain/right-brain dominance” theory is that they do not understand the deep cooperation between the two.

The left brain specializes in matching sounds with the corresponding word meanings, but that does not mean that language processing takes place there alone. It also needs help of the right brain. The right brain helps to understand the emotional features of language, based on intonation and the rhythms of speech.

Also, one study analyzed the brains of more than 1,000 subjects to see if they preferred using one side of the brain over the other. The results showed that certain areas of the brain became more active than others, but both sides of the brain were equally active on average.

If there’s no evidence for left-brain/right-brain dominance, why do so many people believe it? It may have something to do with a psychological phenomenon called the “Barnum effect.” When people hear vague and positive descriptions of personality, they are inclined to believe those descriptions actually fit them. This phenomenon explains why people likely accept statements such as “You are logical and good at math.” or “You are a creative person with intuitive ability.” The dominance theory just gives two names to these types: “left-brained” and “right-brained.”

Though research has denied left-brain/right-brain dominance, students may continue learning the theory. This is a way for students to understand how research on the brain has progressed and changed as more data become available. Do not take the theory too seriously, but it may be worth learning about.

Your summary notes:

### Left Brain or Right Brain

#### Vocabulary:

● *dominance: preference for left-brain/right-brain types of thinking*

● *corpus callosum: 39*

#### The Main Points:

● *Roger W. Sperry proposed that 40.*

● *Later research has shown that 41 and that 42.  
→The left-brain/right-brain dominance theory has been denied.*

● *The "Barnum effect" supports the popularity of brain dominance theory.*

#### The Author's Opinion:

*The left-brain/right-brain dominance theory tells you 43.*

問 1 Choose the best option for 39.

- ① a brain activity only seen in patients during treatment
- ② a surgical operation that cuts the brain in half
- ③ an area that joins two sides of the brain
- ④ an organ that connects the eyes and the brain

問 2 Choose the best option for 40.

- ① both sides of the brain are important for processing language
- ② separating the brain does not affect the brain activities
- ③ separating the brain will change one's personality
- ④ the functions of the left brain and those of the right brain are different

問 3 Choose the best two options for 41 and 42. (The order does not matter.)

- ① about half the subjects preferred logic and the other half intuition
- ② almost all people prefer using the left brain over the right brain
- ③ both sides of the brain work together to do tasks
- ④ language is mostly processed in the right brain
- ⑤ people generally use the left and right brains to the same extent

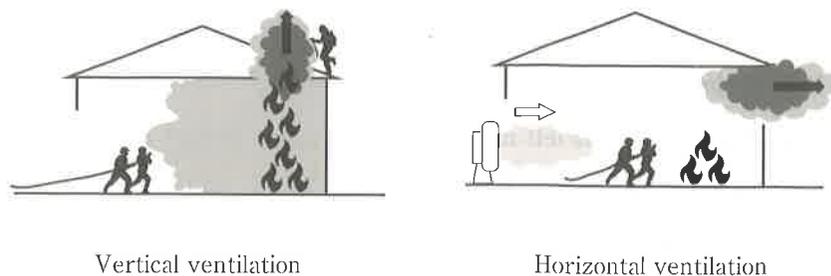
問 4 Choose the best option for 43.

- ① how brain science has developed
- ② how little mystery is left in the brain
- ③ that language and math skills are related
- ④ why people have different personalities

**B** You are in a student group preparing a poster for a presentation contest with the theme "Building types and firefighting procedures." You have been using the following passage to create the poster.

Building structure is one of the most important things firefighters should be aware of to effectively attack the fire. Ventilation, in other words, the circulation of air, is one tactic to clear heat and smoke, but its effectiveness depends on the types of construction. Buildings are broken down into five categories (Types 1—5), based on the structure and material. The fire resistance rating (fire rating, in short) shows the material's strength against fire, as each rating is measured by how long it can be exposed to fire before the structure collapses. For instance, a column with a fire rating of three can be exposed to fire for at least three hours before it breaks down. Materials with a fire rating of zero will typically collapse within an hour.

When exposed to fire, the strongest of all construction types is Type 1, Fire-Resistant Type. Buildings falling into this category are more than 75 feet tall. Type 1 structures are made of concrete and steel coated with fire-resistant material. They are designed to keep the fire from spreading outside the building for an extended period of time. The fire ratings range from two to three hours. The ventilation procedure of getting on the roof and cutting a hole (vertical ventilation) or cutting a hole in the walls or breaking windows (horizontal ventilation) is not an option, as roofs, walls and windows are thick. The internal structure is complex, so firefighters should find and work together with the maintenance workers who are familiar with the building's structure.



Type 2 construction, Non-Combustible Type, is usually found in newer commercial facilities that are under 75 feet tall. The walls and roofs are made of non-flammable concrete and steel just as Type 1 buildings. However, because walls and roofs of this type are not strengthened as Type 1, the fire ratings are the same as those of Type 3 buildings. Also, the structures are more likely to collapse due to spreading fire than Type 1. Cutting holes large enough for ventilation on the roof with usual tools such as chainsaws may not be efficient as the roof's metal may wear off the saw's teeth. Instead, it is recommended to break windows on the roof, or open doors for cargo, which are often found in the rear of these types of buildings.

Various types of residence and commercial buildings today fall into Type 3, Ordinary Type. These buildings have non-flammable walls and roofs supported by wooden frames with fire ratings of one hour. Type 3 buildings often have wooden panels on the roof, through which firefighters can cut holes with chainsaws for ventilation. Firefighters should be alert when operating on these buildings as the structure frame may have become weak due to age. Then, they should find the safest route to the roof for vertical ventilation, as it is very effective for these buildings.

Type 4, Heavy Timber Type, can be found in older buildings. They can be identified by the large lumber used for walls and wide roofs with fire ratings of one hour. Also, because they were mostly built before 1960, bolts and metal plates were used as connectors. Although these buildings are strong under fire conditions, firefighters should still stay alert as they can collapse unexpectedly due to deterioration. For Type 4 buildings, vertical ventilation is effective, too. Though the roof is thicker than that of Type 3, it's worth taking the time to drill holes.

Lastly, many modern homes fall into Type 5, Wood Framed Type. Walls and roofs are mostly made of wood panels, whose fire ratings are up to one hour. Vertical ventilation is difficult as the roofs may be too weak for firefighters to climb onto. Instead, opening a window or creating a hole in the wall is more practical. Then, place a powerful fan on the opposite side of the building and

turn it on at full power. It blows air and let the smoke go out from the window or hole.

The possible way to handle the fire situation varies, depending on surroundings, timing, equipment, and so on. However, learning about building types will give basic clues about how best to attack the fire.

Your presentation poster draft:

### Building Types and Firefighting Procedures

What is a fire rating?

44

Building types and characteristics

Types	Fire Ratings	Ventilation Procedures
1	2 ~ 3	Not suitable for ventilation.
2	45	Open windows on the roof, or doors for cargo.
3	1	Cut a hole in the roof.
4	1	Take the time to cut a hole in the roof.
5	0 ~ 1	46

Building types with common characteristics

47

48

問1 Under the first poster heading, your group wants to introduce the fire rating as explained in the passage. Choose the best option for 44.

- ① It gives an estimate of how long certain building types can be ventilated.
- ② It gives an estimate of how long the building materials can withstand fire.
- ③ It ranks buildings by how difficult they are to put out the fire.
- ④ It ranks buildings by how often firefighters encounter the buildings in fire incidents.

問2 You have been asked to write descriptions of Type 2 and Type 5 buildings. Choose the best options for 45 and 46.

The fire rating for Type 2: 45

- ① 1
- ② 2
- ③ 3
- ④ 4

The ventilation procedure for Type 5: 46

- ① Cut a hole in the roof.
- ② Cut holes both in the roof and the wall.
- ③ Open a window or make an opening in the wall.
- ④ Open the front or back door.

問3 You are making statements about building types which share common characteristics. According to the article, which two of the following are appropriate? (The order does not matter.)  ·

- ① Both Type 1 and Type 2 buildings are over 75 feet tall.
- ② Both Type 4 and Type 5 are found in newer buildings.
- ③ Horizontal ventilation is suitable for both Type 1 and Type 2 buildings.
- ④ Type 1, Type 2 and Type 3 buildings all have walls made of non-flammable material.
- ⑤ Type 2, Type 3 and Type 5 are all found in modern residences.
- ⑥ Vertical ventilation is suitable for both Type 3 and Type 4 buildings.