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次の英文 **A**, **B**, **C** の内容に関して、(27) から (38) までの質問に対して最も適切なもの、または文を完成させるのに最も適切なものを **1**, **2**, **3**, **4** の中から一つ選び、その番号を解答用紙の所定欄にマークしなさい。

From: Jane Brooks <j-brooks@allmail.com>  
 To: Bryan Fields <bfields2@courtpub.com>  
 Date: June 4  
 Subject: Children's book

Dear Mr. Fields,

My name is Jane Brooks, and I have recently finished writing a children's book. This is the first book I have ever written, so I do not have a publisher yet. My friend Glen Hudson is an author, and last year your company published his book, *A Trip through Time*. He gave me your e-mail address and recommended that I contact you.

The title of my book is *Allen's Adventure*, and it is a story about a young boy who loses his teddy bear. He goes looking for the bear, and meets a new character during each part of his adventure—a bee, a cat, and a talking tree. The boy becomes friends with them, and they each teach him an important lesson about life. In the end, the boy finds the teddy bear and goes home to tell his family about what happened.

I have attached a copy of the book to this e-mail. I have also included some of the illustrations, which I drew myself. If possible, I would like to use my own drawings, as I am a professional artist. Please have a look at them and let me know what you think. If you prefer to speak over the phone, you can call my home at 304-555-8989. Thank you, and I look forward to your reply.

Sincerely,  
 Jane Brooks

- (27) Why is Jane Brooks writing to Mr. Fields?
- 1 She wants to introduce her friend to him.
  - 2 She wants his company to publish her book.
  - 3 He edited another children's book that she wrote.
  - 4 He gave her his e-mail address at a book event last year.

- (28) What happens in the book *Allen's Adventure*?
- 1 A bee learns some important lessons about life.
  - 2 A cat becomes good friends with a talking tree.
  - 3 A boy loses his toy and meets some other characters.
  - 4 A family of bears has trouble finding the way home.

- (29) Jane Brooks
- 1 asks Mr. Fields to send a copy of her book to some publishers for her.
  - 2 wants Mr. Fields to recommend a professional artist for her book.
  - 3 would like Mr. Fields to call her at home by the end of the week.
  - 4 gives Mr. Fields another way to contact her if he wants to speak to her.

## *Ballet Brains*

Often after people spin around in circles, they begin to feel dizzy. The world seems to be moving around them, and it is difficult to stand properly. Usually, a liquid in their ears causes signals to be sent to their brains to help them keep their balance. However, if they spin and then stop, the liquid keeps moving, and they become confused about whether they are still moving or not. Ballet dancers, though, often spin around as they dance, but they do not suffer from dizziness.

A group of brain scientists at the Imperial College London decided to examine the brains of 29 female ballet dancers. They put each of the dancers in a chair that quickly turned round and round in a dark room. When they stopped the chair, they asked the dancers to record how long they continued to feel as though they were spinning. The scientists then did the same thing with a group of female athletes. They found that the ballet dancers felt dizzy for a much shorter time than the athletes did.

After they had finished the experiment, the scientists scanned the brains of all the women. To their surprise, they found that the part of the brain called the cerebellum was much smaller in the ballet dancers than in the athletes. The cerebellum is the part that processes the signals from the liquid in the ears. This suggested it is possible to avoid dizziness by changing the way the brain processes these signals. In fact, the ballet dancers' brains had actually developed over the years to make them stronger against dizziness.

According to the scientists, their research suggests the possibility of finding a new treatment for people who suffer from illnesses that cause them to become dizzy. Usually these diseases happen when something goes wrong with their ears. Until now, medical researchers have found it difficult to treat such problems. The new research suggests that, rather than trying to cure the problems in their ears, it may be better to focus on finding a way to help their brains adapt. In this way, they could become as strong as ballet dancers against dizziness.

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People become dizzy after they spin around because

- 1 signals cause the brain to think that the body is moving even though it is not.
- 2 an object makes people lose their balance by blocking signals between the body and the brain.
- 3 they have been standing for such a long time that their body becomes tired.
- 4 the liquids that they have drunk cause their brains to feel like they are spinning.

(31)

What is one thing that brain scientists at the Imperial College London found?

- 1 Female ballet dancers were able to continue dancing as soon as they had stood up.
- 2 Female ballet dancers had trouble spinning around when they were in the dark.
- 3 Female athletes took less time to stand up from a chair than female dancers.
- 4 Female athletes continued to feel dizzy for a longer period of time than female ballet dancers.

(32)

The experiment suggested that ballet dancers' brains

- 1 are smaller and more easily damaged than athletes' brains.
- 2 can be cured of dizziness by scientists researching the brain.
- 3 produce more liquid to help them process signals more efficiently.
- 4 have developed a different way to process signals sent from their ears.

(33)

According to scientists, how can the research on ballet dancers' brains be used?

- 1 To reduce the amount of practice needed to become a good dancer.
- 2 To treat health problems that have been difficult to treat.
- 3 To help people who have trouble with their hearing.
- 4 To show people how to learn to concentrate better.

## *Cairo's Garbage*

A major problem that faces modern cities is how to deal with the increasing amount of garbage that people produce. Cairo, the capital of Egypt, has a population of 15 million people. This leads to an enormous amount of garbage. Yet, until recently, the city had no official system for collecting garbage. Instead, a group of people known as the Zabbaleen collected and recycled the garbage in order to make a living for themselves. Now, many people are saying that the Zabbaleen's methods were more efficient than those used in most of the world.

The Zabbaleen are mainly the descendants of poor farmers who first settled in Cairo during the 1950s. Traditionally, the men went from house to house collecting garbage with a cart pulled by a donkey. Meanwhile, the Zabbaleen women stayed at home and sorted through the garbage that the men brought back. Any food that was collected was fed to their pigs and chickens, while other materials were used to make cloth and other goods. In this way, over 80 percent of the garbage was recycled.

Life was not easy for the Zabbaleen. Their housing was bad, and they often suffered from poor health. Over time, however, both their housing conditions and their lifestyles have improved. A school, clinic, and park were built by the government for the Zabbaleen, and the children started to receive a better education. More and more of the younger generation are able to receive university degrees. At the same time, they began to focus on recycling high-tech materials, such as computer parts, which has allowed them to make more money.

From the 1980s, Cairo began to produce more garbage than the Zabbaleen could collect. Then, in 2003, the city decided to employ two European companies to help handle some of the garbage. Many people were not pleased with the new system. One problem was that it cost more money. Another was that far less was recycled, leaving more garbage to be buried in the ground. Hoping to reduce costs and improve the environment, many people would now like to expand the traditional method of collecting garbage.

- (34) Until recently, the city of Cairo had
- 1 hired a group of people to collect and recycle garbage.
  - 2 asked its population to make efforts to reduce the amount of garbage.
  - 3 not provided an official service for dealing with garbage.
  - 4 not had enough money to pay the people who removed garbage.

- (35) What did the Zabbaleen do with most of the garbage they collected?
- 1 They used it as food for their animals or turned it into new products.
  - 2 They took it to garbage collection facilities using their donkeys and carts.
  - 3 The women sorted it and the men took it back to where it came from.
  - 4 The men used it to produce the materials they needed to build their farms.

- (36) What problem did the Zabbaleen face?
- 1 They had poor living conditions and often became sick.
  - 2 They were unable to make enough money to feed their families.
  - 3 The government did not allow them to get an education.
  - 4 The government did not provide them with computers.

- (37) Why do many people want to expand the old style of garbage collection?
- 1 They want to find a way to support other developing countries.
  - 2 They think that it is cleaner and safer to bury garbage in the ground.
  - 3 They believe that it is cheaper and better for the environment.
  - 4 They hope that it will provide more jobs for people in the city.

- (38) Which of the following statements is true?
- 1 A majority of people in Cairo were poor during the 1950s.
  - 2 More young Zabbaleen now have the chance to attend university.
  - 3 Cities with over 15 million people have found a cheaper way to collect garbage.
  - 4 European companies can collect garbage at half of the cost of Egyptian companies.