

I 次の会話を読み、下記の設問に答えよ。(配点 25)

Tyler: Well, that was a fun movie, wasn't it?

Sharon: Yeah, I really liked it! So, are you hungry? Let's get some dinner and talk about the movie some more.

Tyler: Sure, I'm starving. What should we have? There's an Italian restaurant near here. It's pretty famous.

Sharon: Why don't we try Omiya Alley? Have you ever been there?

Tyler: No, I haven't, but I think I've heard of it before. Is it some kind of restaurant?

Sharon: It's not a restaurant. It's a street with food carts all along the sides. We can buy different kinds of food and go up and down the street while we eat. If we get tired, we might be able to find a bench to sit on.

Tyler: That sounds great! 2

Sharon: Well, I really like food that's convenient to eat, so anything on a stick is fine. The first place I usually go is the Osaka food cart. They have the tastiest grilled squid and octopus balls.

Tyler: Octopus? Squid? I'm not sure I'm ready for that. What are some other options?

Sharon: Next to that place is the Thai cart. They have a nice green curry. I like it a lot.

Tyler: OK, now that sounds like something I want to try, so let's go there. Anything spicy is fine by me. Are there any places that sell just meat?

Sharon: Of course, there are! I'll bet you would like the Southern BBQ cart. They have all kinds of barbecue, like beef, pork, turkey leg, and...

Tyler: Oh yeah, I want to have the turkey leg! That's one of my favorite meals. My grandmother used to make it for my birthday when I was a kid.

Sharon: Perfect! Then, all we need to do is decide on dessert. I think a chocolate-covered banana from the Banana-rama cart is called for.

Tyler: Oh, you know me so well! But we must go to the Southern BBQ cart first. I can't wait to sink my teeth into that turkey.

Sharon: That sounds like a great plan. Let's turn left here. I need to stop by the bank on the way. I spent my last money on popcorn.

(1) 下線部 “Omiya Alley” の説明として最も適切なものを次の中から1つ選び、その番号をマークせよ。

- ① A famous Italian restaurant which is the nearest to the movie theater
- ② A comfortable spot where customers can see movies and buy popcorn
- ③ A place where many stands sell food to people walking around
- ④ A street market where a variety of shops sell international carts

(2) 空所 に入る最も適切なものを次の中から1つ選び、その番号をマークせよ。

- ① Can we find a convenience store to buy some snacks?
- ② What kind of food do you like to get there?
- ③ How do we find some place to take a rest?
- ④ Why do you stick to sitting on a bench there?

(3) 会話の内容に合うように、次の1)～3)の問いの答えとして最も適切なものを下記の中からそれぞれ1つ選び、その番号をマークせよ。

1) Which food does Tyler prefer NOT to eat?

- ① Octopus balls
- ② Green curry
- ③ Some kind of meat
- ④ A chocolate-covered banana

2) Which of the following statements about Tyler is true?

- ① He wants to see another episode of the movie series soon after dinner with Sharon.
- ② He is not a regular customer of the street he and Sharon are talking about.
- ③ His grandmother used to grill seafood when he and she lived together.
- ④ He suggests having dessert after he and Sharon have had enough meat.

3) Where is the first place Tyler and Sharon will most likely go after this conversation?

- ① The movie theater
- ② The Thai cart
- ③ The Southern BBQ cart
- ④ The bank

II 次の案内ポスターを読み、下記の設問に答えよ。(配点 25)

Townsville College Study Lounge

Come and visit the Townsville College Study Lounge! Many students love hanging out with their friends in the Townsville College Student Union. But do you do much studying there? According to a recent survey, while nearly all students enjoy the Student Union for social interactions with other students, including playing games and eating lunch, the majority of respondents said they would also appreciate a quiet environment to focus on their academic studies on campus. Starting from August 31, the Townsville College Study Lounge will open on the second floor of Building A.

How to access the Study Lounge

The Study Lounge will be open from 7:00 a.m. to 11:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m., Saturday and Sunday. Please note this applies to the Study Lounge generally, and specific services may have different hours. Townsville College students can access the Study Lounge by tapping their college ID cards on the reader at the main counter. If you forget your ID card, the staff will ask you to get a temporary ID card at the counter before entering. This will help the college maintain accurate attendance records and ensure student security. When coming to the Study Lounge, please , as the elevator in the main lobby does not stop at the second floor.

Services

Besides the main Study Lounge area, Townsville College also offers small group meeting rooms for students to work on projects with classmates, available from noon until closing time every day. Students may also check out a projector for the meeting room, but this must be done two days in advance. Please speak to the counter staff for details. There are also vending machines for hungry and thirsty students located near the main counter, where students can purchase snacks and drinks during long study sessions. These machines only accept the prepaid accounts on student ID cards, so please do not try to use bills or coins.

Rules

The main Study Lounge area is meant to be silent so that students may study in peace. Students wishing to have a groupwork or tutoring session are requested to use the meeting rooms. Drinks with a lid are permitted. Food with noisy packaging or a strong smell is not permitted. This will be based on the judgement of the counter staff. Please take your trash with you, and do not leave anything behind.

(1) 次の英文の空所に入る最も適切なものを下記の中から1つ選び、その番号をマークせよ。

The Study Lounge was created because .

- ① the Student Union was too noisy for many students to study in peace
- ② the survey showed less than half of the students enjoy playing games on campus
- ③ students need to have a larger place for social interactions
- ④ the opening hours of the previous lounge was too short for students to use

(2) 空所 に入る最も適切なものを次の中から1つ選び、その番号をマークせよ。

- ① stop by the counter
- ② use the stairs
- ③ bring your ID card with you
- ④ buy some drinks beforehand

(3) 次の1)～3)の問いの答えとして最も適切なものを下記の中からそれぞれ1つ選び、その番号をマークせよ。

1) What is the main purpose of this poster?

- ① To give notice of the Student Union to prospective students
- ② To explain the details of the Study Lounge to current students
- ③ To promote the use of the Student Union for studying to the survey respondents
- ④ To inform students how they can record their presence at the Study Lounge

2) Which of the following statements about the services at the Study Lounge is true?

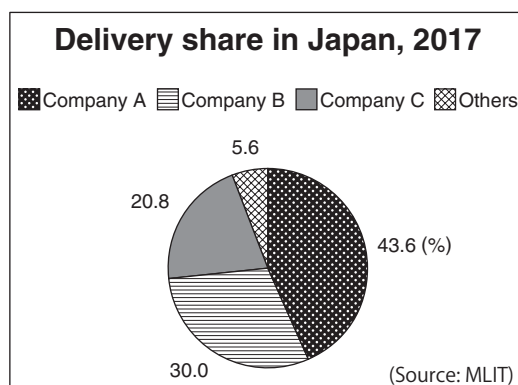
- ① The main lounge area is only accessible to students in groups.
- ② Meeting rooms are available until 11:00 p.m. on weekends.
- ③ Projectors may be booked at the counter on the day they will be used.
- ④ Cash cannot be used at the vending machines to buy food and drinks.

3) Which of the following statements about the rules at the Study Lounge is NOT true?

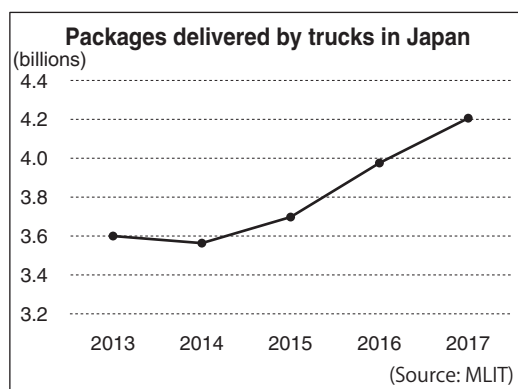
- ① Talking loudly with friends is prohibited in the main lounge area.
- ② Students had better use meeting rooms when they have something to discuss.
- ③ Students are permitted to eat only foods bought from the vending machines on the floor.
- ④ Students are encouraged to clean up their area when they leave the lounge.

III グラフを参照して、宅配便ロッカーに関する次の英文を読み、下記の設問に答えよ。
 (配点 25)

The third largest delivery company in Japan is considering participating in the shared delivery locker service used by the other two rival companies. With more households in which everyone works during the day, this rare cooperation among the nation's three largest delivery companies is expected to enhance convenience for people who are not home during delivery hours and 11 .



The shared lockers are found in places such as train stations, supermarkets and convenience stores. As of the end of January 2019, there were about 3,500 lockers set up by a certain locker operating firm, mainly in major cities such as Tokyo, Osaka, Nagoya and



Fukuoka. The firm, some of whose stock is owned by the industry leader, aims to have more than 5,000 lockers in Japan in 2022. These lockers can be designated as the delivery destination for some online purchases. They can also be used for redelivery after an unsuccessful delivery attempt.

As a matter of fact, the third largest delivery company has its own delivery lockers, but these are available in only about 400 locations. Joining the service used by the rivals would provide more delivery sites, and sharing lockers with them would lower costs. The top three companies handle a total of some (ア) percent of deliveries nationwide, meaning this shared service could be used for most deliveries across Japan.

In recent years, the spread of online commerce has increased the number of packages being delivered. The number of packages delivered by trucks in 2017 grew 5.9 percent compared to the previous year, reaching (イ) billion packages, according to the Ministry of Land, Infrastructure, Transport and Tourism (MLIT). An October survey conducted in 2018, however, found that redeliveries made up 15.2 percent of all such deliveries.

The delivery industry is facing a severe worker shortage as job-seekers tend to

avoid becoming truck drivers due mainly to long working hours and relatively low pay, among other factors. The ratio of openings to applicants for these jobs reaches about three to one. The industry hopes that the spread of delivery lockers will be a trump card in easing this burden.

(Source: *Delivery locker services likely to expand/Japan Post mulls joining rivals Yamato, Sagawa, The Japan News, March 30, 2019*)

(1) 空所 に入る最も適切なものを次の中から1つ選び、その番号をマークせよ。

- ① decrease the number of packages ② share their drivers
③ reduce redeliveries ④ compete with the rivals

(2) 下線部1) “the third largest delivery company” に関して、本文の内容に合うものを次の中から1つ選び、その番号をマークせよ。

- ① It aims to increase the number of delivery lockers to 5,000 by the end of 2022.
② It has already set up about 400 lockers in cooperation with the locker operating firm.
③ Its redelivery rate of 15.2 percent in 2018 was the highest in the delivery industry.
④ It may potentially cut down on expenses by sharing lockers with the rivals.

(3) グラフを参照し、空所 (ア) と (イ) に入る数字の組み合わせとして最も適切なものを次の中から1つ選び、その番号をマークせよ。

(ア) — (イ)

- ① 20 — 3.98
② 90 — 4.21
③ 20 — 4.21
④ 90 — 3.98

(4) 本文の内容に合わないものを次の中から1つ選び、その番号をマークせよ。

- ① 日本の宅配業界上位3社が協力することはまれである。
② 宅配便ロッカーは、再配達品の受取にも使用できる。
③ 近年はオンライン取引の拡大によって、宅配便の取扱個数が増加している。
④ 宅配配達員の求人は、3人の求職者に対して1件ほどである。

(5) 下線部2) “be a trump card” と文脈を変えずに置きかえられる最も適切なものを次の中から1つ選び、その番号をマークせよ。

- ① be most effective ② be handed out
③ play a minor role ④ make it tricky

IV 次の英文を読み、下記の設問に答えよ。(配点 55)

A bread image recognition system is spreading among bakeries across Japan as the system instantly identifies various types of breads and calculates the bill for them at the register.

As products like freshly baked bread tend 16, making it impossible to attach barcodes or price tags to them, it often takes time for cashiers to determine the sum, causing long lines.

Based on artificial intelligence technology, the bread image recognition system was invented by a computer system developer in Hyogo Prefecture. When bread products on a tray are put on the counter at the register, images are taken that are then analyzed using AI, with the contours and prices shown on the monitor within one second. At large bakeries that sell as (ア) as 100 types of products, the system allows even new part-timers to quickly handle a (イ) number of customers. Since its release in 2013, the bread image recognition system has been introduced at 400 outlets of a leading bakery and other bakery operators across the country, receiving overseas news coverage.¹⁾

The computer system company, which started as a small computer shop operator in 1982, began developing the bread image recognition system around the time of the collapse of U.S. investment bank Lehman Brothers in 2008.²⁾

While the company's system to display the results of professional baseball games and foreign exchange rates drew attention when it was adopted by a broadcasting company in 1984, few development orders came in at the time, putting the president of the company at a loss as to the future of the company. For that reason, when the president, who formerly worked at a large electronics corporation, was asked 17 his company could create a device to quickly scan products at bakeries, he jumped at the offer. "There are more than 10,000 bread stores across the nation," said the president. "I wanted to pitch our product to the huge market to move our business forward."

Another factor that led him 18 the decision is the fact that his company had accumulated know-how on image identification technology, as it had developed a camera-mounted system to check whether textiles made of Banshu-ori fabric—a local specialty in Hyogo Prefecture—are properly woven in accordance with design drawings.

The initial development of the bread image recognition system did not go smoothly, although the project was taken on with the future of the company at stake.

It was difficult for the system to precisely distinguish different baked goods with the same shape, such as those with ham and those with corn. To solve this issue, the system was improved to assess the position of ingredients and the shadow patterns in numerical form so the AI could make correct determinations.

After spending an entire year developing the system jointly with a university in Hyogo Prefecture, a prototype was completed. But even the completed system could not identify bread products with 100 percent accuracy.

The development team then changed directions to leave some things to human judgement instead of clinging to a quest for perfection. Under the bread image recognition system, unidentified items are shown in yellow for cashiers to choose the correct product types from displayed candidates. The AI system then learns from the staff's choices to improve accuracy.

The company has already begun taking the next step. It received a surprise inquiry two years ago from a doctor who told an official of the company that “bread resembles cancer cells.” The physician went on to say that humans can detect only a limited number of cancer cells in a certain period of time. Acting on the prospect that an image recognition system could more quickly identify tumors even if they are at early stages, the company is proceeding with joint research with a medical research center in Kyoto to complete such a system.

(Source: *AI bakeries know what you are buying for instant check-out* (The Asahi Shimbun Asia&Japan Watch, November 8, 2019))

(1) 空所 ～ に入る最も適切なものを次の中からそれぞれ1つ選び、その番号をマークせよ。

- | | | |
|---------------------------------|---------------|---------------------|
| <input type="text" value="16"/> | ① wrap | ② be wrapped |
| | ③ not to wrap | ④ not to be wrapped |

- | | | | | |
|---------------------------------|------|----------|------|---------|
| <input type="text" value="17"/> | ① if | ② though | ③ as | ④ while |
|---------------------------------|------|----------|------|---------|

- | | | | | |
|---------------------------------|-------|------|------|--------|
| <input type="text" value="18"/> | ① for | ② in | ③ to | ④ from |
|---------------------------------|-------|------|------|--------|

(2) 下線部1) “receiving overseas news coverage” と文脈を変えずに置きかえられる最も適切なものを次の中から1つ選び、その番号をマークせよ。

- ① newly awarded by overseas media
- ② reported by overseas media
- ③ adding a new value to the system in foreign countries
- ④ accepting new workers from foreign countries

(3) 空所 (ア) と (イ) に入る組み合わせとして最も適切なものを次の中から1つ選び、その番号をマークせよ。 20

(ア) — (イ)

- ① many — large
- ② much — large
- ③ many — small
- ④ much — small

(4) 下線部2) “The computer system company” に関して、本文の内容に合うものを次の中から1つ選び、その番号をマークせよ。 21

- ① 小さなパソコン部品製造工場として1982年に創業した。
- ② リーマン・ショックのあった2008年に、現在のパン画像識別システムを完成させた。
- ③ 開発したシステムの中には、ある放送局に1984年に採用されて注目を集めたものがある。
- ④ 創業当時はシステム開発の注文が少なく、将来にわたって大きな負債を抱えることになった。

(5) 下線部3) の和訳として最も適切なものを次の中から1つ選び、その番号をマークせよ。

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- ① そのシステムでは、本来同じ形であるハムのパンとコーンのパンを、正確な識別のために異なる形に焼きあげることは困難だった。
- ② そのシステムでは、ハムのパンとコーンのパンといった異なるパンが、同じ形に焼きあがってしまうと、正確に識別することが難しかった。
- ③ そのシステムは、正確には同じパンなのに、ハムのパンとコーンのパンというように異なる形のものとして識別してしまうので、導入が困難だった。
- ④ そのシステムでは、ハムのパンとコーンのパンといった、同じ形ではあるが異なるパンを正確に識別することが難しかった。

(6) 下線部4) “some things” に含まれる具体的なものとして最も適切なものを次の中から1つ選び、その番号をマークせよ。 23

- ① directions
- ② unidentified items
- ③ cashiers
- ④ cancer cells

(7) パン画像識別システムについて、本文の内容に合うものを次の中から2つ選び、その番号をマークせよ。ただし、解答の順序は問わない。

- ① そのシステムは、様々なタイプのパンを即座に識別できるよう、日本中のパン屋で改良が重ねられている。
- ② そのシステムの発明は、AIの発展の基盤となった。
- ③ トレイに載せたパンをレジのカウンターに置くと、まずAIを使用した分析が行われ、その後画像が撮影される。
- ④ AIの分析により、レジでは1秒以内にパンの形と価格がモニターに表示される。
- ⑤ AIが正しく判断するために、パンの具材の位置や影のパターンを数値で評価するよう、そのシステムは改良された。
- ⑥ 兵庫県の大学との共同研究により、そのシステムは100パーセント正確にパン製品を識別できるように改良された。

(8) 下線部5) “The company has already begun taking the next step” に関して、本文の内容に合うものを次の中から1つ選び、その番号をマークせよ。

- ① その会社は2年前に、ある医師からがん細胞に似せたパンを製造できないかという問い合わせを受けた。
- ② 人の目ではある時間内に限られた数のがん細胞しか検知することができない、という問題の改善に取り組んでいる。
- ③ がんの初期段階であれば、画像識別システムは人間よりも速く腫瘍を発見することができるようになった。
- ④ その会社は京都のある医学研究センターと共同で、腫瘍を発見するシステムをすでに完成させている。

V 次の英文を読み、下記の設問に答えよ。(配点 20)

A police station in Kyoto Prefecture has begun to offer fortune-telling paper slips that provide lessons on Japan's traffic signs. The police station wants (① by ② learn ③ to ④ people ⑤ in)¹⁾ a fun way about traffic signs and to promote road safety. The unusual service is also popular with children, and the police station is hoping that people will have fun while they learn.

The project was planned mainly by four officers who work in the traffic department as part of road safety efforts over the New Year period. One of the officers came up with the idea for the “omikuji” fortune-telling slips. She said, “Omikuji is a popular tradition around the New Year. I thought it would (① fun ② if ③ be ④ have ⑤ we)²⁾ offered them at the police station.”

The box for fortune slips and ornaments are all handmade. Officers selected 38 traffic signs and each slip explains what they mean along with fortune marks for the year such as “daikichi” and “kichi.”

The number of traffic accidents in Kyoto Prefecture had been decreasing over recent years, but the death toll rose in 2019 for the first time in two years. In particular, the number of cycling fatalities doubled. The head of the traffic department commented, “Many (① who ② pick ③ of ④ those ⑤ what)³⁾ fortune-telling slips are children, and they often ride bicycles. I hope the event will be a good chance for them to learn about different traffic signs.”

There are winning tickets among the slips, and the police station will present safety reflectors to the winners. Meanwhile, a subsection chief at the department warned, “Traffic safety is not about luck. Please try to always stay safe.”

(Source: *Kyoto police station offering road-safety themed fortune-telling slips, The Mainichi*, January 11, 2020)



(1) 下線部 1) ~ 3) を文脈に合うように並べかえる際、 unnecessaryなものが1つ含まれている。

その語句をそれぞれ1つ選び、その番号をマークせよ。

下線部 1)

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| 27 |
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下線部 2)

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| 28 |
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下線部 3)

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| 29 |
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(2) 本文の内容に合う最も適切なものを次の中から1つ選び、その番号をマークせよ。

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- ① A police station in Kyoto Prefecture borrows the “omikuji” box from the neighborhood.
- ② The number of people killed in various traffic accidents doubled in two years.
- ③ According to a police officer, if you get a “daikichi” slip, it means you are always safe on streets during the year.
- ④ Through the efforts of these police officers, children naturally acquire the knowledge about some traffic rules while enjoying a traditional culture.