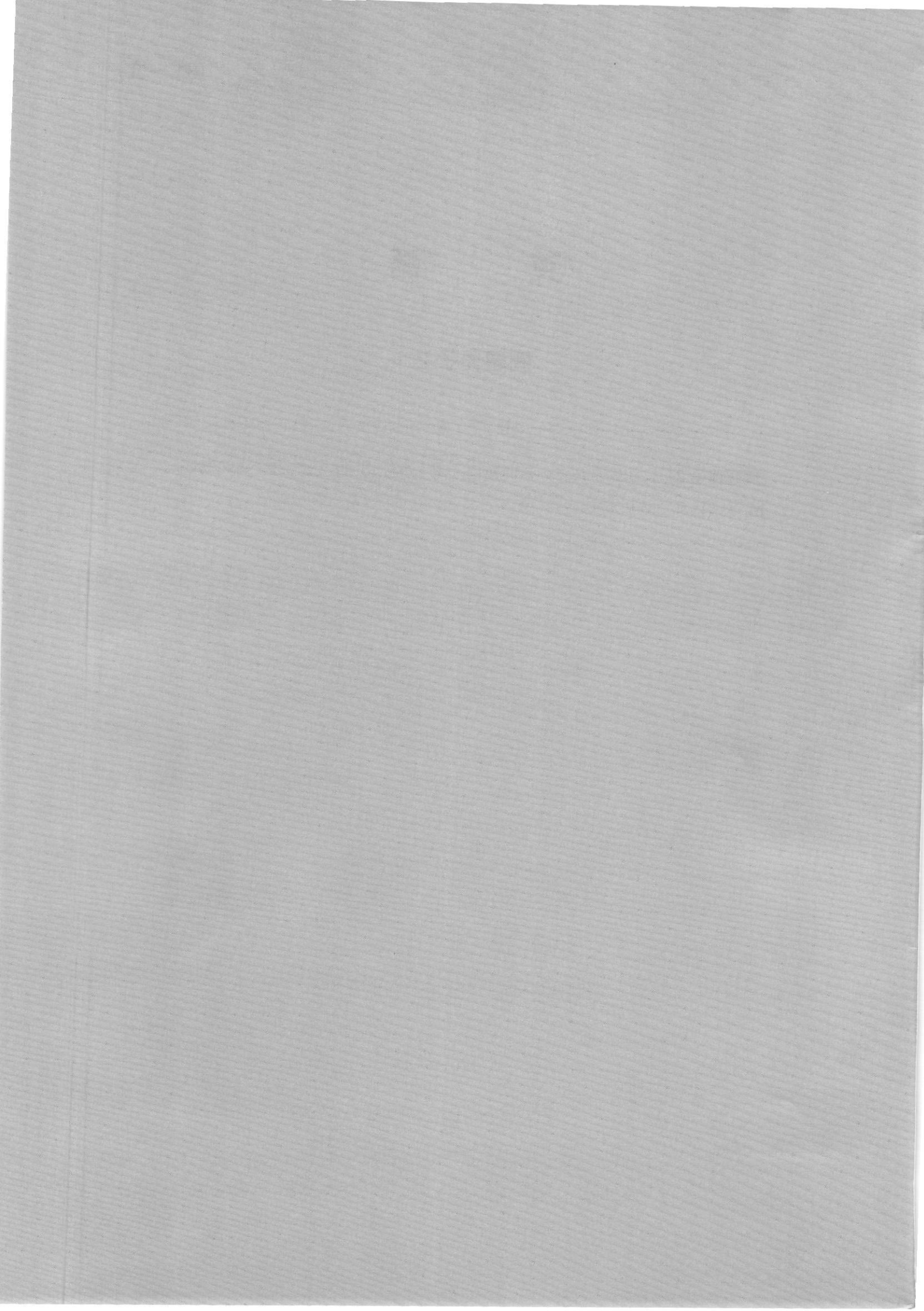


英 語

問題冊子 2

注 意

「問題冊子 2」に印刷されている問題は、 から までで、2 ページから 14 ページまであります。



- 2 次の対話の文章を読んで、あとの各問に答えなさい。
(*印の付いている単語・語句には、本文のあとに〔注〕がある。)

*Yumi, Hiroki, Kenta and Ted are high school classmates. Ted is a student from the United States. They are talking about their *Information Study *presentation in their classroom after school. The presentation will be held in September.*

Yumi: Our Information Study teacher told us to talk about *AI. There are many things with AI around us. We often hear about some robots with AI such as a talking robot dog. We still do not have any good idea for our presentation. Do you have any idea, Hiroki?

Hiroki: (1)-a

Kenta: We are really tired because we have talked a lot but cannot decide.

Yumi: We cannot leave here before we decide what to study about AI.

Ted: How about trying to play a word-chain game in English?

Yumi: What? We don't have enough time to play such a game.

Ted: My father says that doing something different sometimes gives us a *clue to our problems.

Yumi: OK. Tell us about the way to play the word-chain game in English.

Ted: (1)-b Now we will start with our word, "AI." What is the last *letter in "AI"?

Kenta: You mean I need to say a word which begins with "I" in "AI"... "Internet."

Ted: You easily understood what I meant. You should say a word which begins with the last letter in "Internet," Hiroki, OK?

Hiroki: Mm... I'm a little nervous. Oh, I've found the word. We are studying about AI as a team. "Team!" Next, Yumi.

Yumi: "M"... I have to finish my math homework after this meeting. "Math." I know you are good at math, Ted. OK, it's your *turn, Kenta.

Kenta: "Hat!" Ted wears a "Hat" when he comes to school. Hiroki!

Hiroki: "Taxi!" Oh, I remember! Some taxi drivers are using AI *car navigation system in Japan.

Ted: Really? How did you find that interesting information, Hiroki?

Hiroki: Actually, I have an uncle who works for a taxi company. He says the company uses AI car navigation system in their taxies.

Ted: Great! (1)-c

Hiroki: I'll ask him.

Ted: You'll ask how the taxi drivers in the company are using AI. Then I'll try to explain how AI works from a *mathematical viewpoint.

Yumi: Now, we have decided to study about two things. Actually, your game worked really well, Ted!

Ted: Thanks! Now let's meet here next Monday and talk about them.

On Monday, they are talking more about AI in their classroom.

- Ted:* I found one of the strong points of AI. AI can *categorize things by itself.
- Hiroki:* What do you mean?
- Ted:* Well, for example, now I am wearing a hat, and you three aren't. We can categorize ourselves into two groups, the group with hats and the group without hats. Then we decide who *belongs to each group. AI can do this by itself.
- Hiroki:* I see. What is the difference between AI and other computer programs?
- Ted:* To categorize things with a computer program, we need to make a *function first. But AI is different. AI can make a function by itself.
- Hiroki:* Wait, Ted. What is a function?
- Ted:* A function is $\text{"}y = f(x)\text{"}$.
- Hiroki:* Oh, math!
- Ted:* The "f" is the first letter in the word, "function." The "x" means *data. The "y" means things produced by the function. We first learned a function like " $y = 3x + 2$ " at junior high school before we learned " $y = f(x)$ " at high school. I'll give you an example. A company in the US gave a lot of pictures of different animals to AI. Then AI was able to categorize them by itself. For example, AI made a group of cats. Actually, AI doesn't know that the animals in the group are cats. It is only categorizing the animals which look similar. People in the company were surprised to find .
- Yumi:* Mm...I have a question. How can AI put those pictures into "x"? They are just pictures.
- Ted:* That's a good question. All information such as colors in the pictures is *numbered as data. AI uses the data and categorizes the pictures.
- Yumi:* It's very interesting. Now I understand how AI is used in many ways in our daily life. Can you think of another example?
- Hiroki:* Yes, I remember! AI taxies! My uncle said it is OK for us to take taxies before giving our presentation.
- Kenta:* Great! Then we can show how AI is used in our daily life in our presentation.

*Next Sunday, they visited the taxi company. Kenta and Hiroki took a taxi of Hiroki's uncle, an *experienced driver. Yumi and Ted took a taxi of a new driver. After taking the AI taxies, they are talking about their experiences in Hiroki's uncle's office.*

- Kenta:* How was it, Yumi?
- Yumi:* A new driver, Ms. Miki, was driving her taxi for Ted and me. She used the AI car navigation system very well.
- Ted:* The system could show where a lot of people were.

Hiroki: Just a second. Some of them want to take a taxi, but others don't, right?

Ted: You're right. But the system knows when and where people get in and get out of taxis.

Hiroki: What did Ms. Miki say about the AI car navigation system?

Yumi: She said it's like her teacher. She doesn't know much about the area, so she often uses the system. It's so helpful. How about your taxi?

Kenta: Hiroki's uncle was driving for Hiroki and me. He knows about the roads as well as AI does.

Ted: Is it necessary for him to drive a taxi which has the AI car navigation system?

Hiroki: It's a good question, but it's a little difficult for me to answer your question clearly.

Ted: What do you mean?

Kenta: AI shows where a lot of people will get in a taxi. It means every taxi driver using the AI car navigation system has the same information.

Yumi: A lot of taxis will come to the same place.

Hiroki: My uncle is afraid that he won't be able to find any *passengers. (4).

Ted: He is really an experienced driver!

Hiroki: But he sometimes doesn't find any passengers. In that case, he follows the system.

Ted: New drivers like Ms. Miki often use the AI car navigation system, and even experienced drivers like your uncle need it, too. That means almost all the taxi drivers need the system.

Hiroki: Can you ⁽⁵⁾ 【① another ② guess ③ has ④ the company ⑤ done ⑥ thing】? A lot of drivers wrote down the *records about their passengers on their notebooks several years ago.

Yumi: Yes, I know the answer. The records are numbered as data, right? We have learned how AI can find the difference between cats and other animals. *Digitized information is needed as data when we use AI.

Hiroki: That's right! Then, how is digitized information used in our daily life? Let's try to find other examples.

Ted: That's a great idea!

Kenta: I'm looking forward to our presentation.

〔注〕 Information Study (科目) 情報	presentation プレゼンテーション
AI 人工知能	clue 手がかり
letter 文字	turn 番
car navigation カーナビゲーション	mathematical viewpoint 数学的な見方
categorize 分類する	belong to 所属する
function 関数	data データ
number 番号をつける	experienced driver 経験豊富な運転手
passenger 乗客	record 記録
digitized デジタル化された	

〔問1〕 ～ の中に、それぞれ次のA～Dのどれを入れるのがよいか。その組み合わせが最も適切なものは、下のア～カの中ではどれか。

- A Can you give me some advice?
- B Sure, I'd love to.
- C Not at all.
- D Can we take the taxi?

	(1)-a	(1)-b	(1)-c
ア	A	B	C
イ	A	C	D
ウ	B	A	C
エ	B	D	A
オ	C	B	D
カ	C	D	A

〔問2〕 $y=f(x)$ とあるが、本文中で Ted が述べている “y” に関する記述として、最も適切なものは次の中ではどれか。

- ア AI sees “y” as numbers and then puts them into groups.
- イ AI uses “y” as useful digitized information.
- ウ AI categorizes the data “y” when it is given the function.
- エ AI makes groups of similar data but doesn't know what “y” is.

〔問3〕 本文の流れに合うように、 に英語を入れるとき、最も適切なものは次の中ではどれか。

- ア AI is used in many places in daily life, especially in the US
- イ AI can make groups of the same kind of animals without humans' help
- ウ AI can categorize the same kind of animals if humans teach AI about it
- エ AI is very helpful and already used in companies in the US

〔問4〕 本文の流れに合うように、 に英語を入れるとき、最も適切なものは次の中ではどれか。

- ア He always follows the system, and he is able to find a lot of passengers all the time
- イ He often follows the system, but sometimes he is not able to find any passengers
- ウ He usually doesn't follow the system, and he runs slowly for people to find his taxi
- エ He doesn't follow the system at all, but he finds many passengers from his experience

〔問5〕 ⁽⁵⁾【① another ② guess ③ has ④ the company ⑤ done ⑥ thing】とあるが、本文の流れに合うように、 内の単語・語句を正しく並べかえたとき、 内で**2番目**と**4番目**と**6番目**にくるものの組み合わせとして最も適切なものは次のア～カの中ではどれか。

	2番目	4番目	6番目
ア	①	④	⑤
イ	①	⑤	⑥
ウ	③	①	⑤
エ	③	④	⑥
オ	⑥	①	③
カ	⑥	⑤	④

〔問6〕 次の(1), (2)の文を、本文の内容と合うように完成するには、 の中に、それぞれ下のどれを入れるのがよいか。

(1) When Yumi, Hiroki, Ted and Kenta first talked about AI, they decided to study about .

- ア math used in AI system and the car navigation system
- イ many kinds of machines and talking robots we often see
- ウ taxies and the AI car navigation system they have seen
- エ things and animals which are categorized by a company

(2) The taxi drivers use the AI car navigation system because .

- ア they want to know how to get to the place people want to visit
- イ they want to know when and where people take and leave taxies
- ウ they want to know which station many people use to go to work
- エ they want to know why many people use taxies to come to the place

〔問7〕 本文の内容と合っているものを、次のア～キの中から二つ選びなさい。

- ア The Information Study teacher told them to play a word-chain game before they decided what to do in their presentation.
- イ Yumi, Hiroki, Ted and Kenta did not have any good idea for their presentation because they did not talk about it at all.
- ウ Yumi wanted to use the examples of talking robots and the AI car navigation system in their presentation.
- エ Hiroki's uncle has a taxi company, and the drivers use the AI car navigation system in their taxis.
- オ When people want to use AI, all data are changed into numbers because AI understands things as numbers.
- カ Many taxi drivers write down the records about their passengers now to use them for the AI car navigation system.
- キ Yumi, Hiroki, Ted and Kenta will talk about some ways to use digitized information in their life in their presentation.

〔問8〕 次の文章は、Yumi が家に帰ってから書いた日記の一部である。(a)～(d)に入る最も適切な英語 1 語をそれぞれ本文中から抜き出ささい。

Last week, I enjoyed listening to Ted's story about the function. We learned the function during (a) class at school. I didn't imagine that AI can categorize things by itself. But AI which an American company used was able to categorize the photos of (b) in animals. It was amazing! When we use AI, we need to change everything into numbers as data, such as colors in (c) and all records used in AI taxis. We studied a lot about the AI car navigation system, too. We also found that AI can categorize things as we do. I'm sure if we find more about digitized information used in our life, we can give a better (d) in our Information Study class this fall.

このページには問題はありません。

次のページに進みなさい。

3 次の文章を読んで、あとの各問に答えなさい。

(*印の付いている単語・語句には、本文のあとに〔注〕がある。)

Saki moved from Nagaoka, Niigata to Tokyo with her family when she was a second-year student in junior high school. In Nagaoka, her family lived with her father's parents. But when her father was *transferred to Tokyo, the grandparents decided that they would stay in Nagaoka.

Now, Saki, a first-year student in high school, is busy studying and playing tennis at school. She enjoys her school life and doesn't often remember the days in Nagaoka. Saki's grandmother in Nagaoka likes to write letters *by hand to her sisters, children, friends and Saki. Her grandmother tells Saki about her daily life, the changes of the seasons, and people in the *neighborhood. She always ends her letters by saying, "Saki-chan, tell me about your high school life. I am waiting for your letter." When a letter comes, Saki's mother always tells her to write back to her grandmother soon. But now, she has a lot of things to do every day. She thinks, "Grandma sends me letters too often!"⁽¹⁾ If she has a *smartphone, I can send her short messages."

Of course, Saki loves her grandmother because she loves Saki and worries about her. When Saki was a little girl, her grandmother took good care of her. Now, Saki enjoys writing and sending short messages to her friends on her smartphone in her free time. They can get quick answers from each other. "When I write a letter to Grandma, I have to wait for several days until I get an answer from her. It's not very useful," Saki thinks.

One day in July, during the summer vacation, Saki took part in one of the school's volunteer programs. She went to the *city community center with some of her classmates to talk with some old people living in the neighborhood. There, she met Mrs. Kimura. She was about 70 years old. She was smiling and looked kind. Saki remembered her own grandmother when she saw Mrs. Kimura. Soon Saki started to talk with her. She said to the old lady, "I moved from Nagaoka to Tokyo with my family a few years ago." Mrs. Kimura said, "Oh! Nagaoka! I have been there once to see that famous *fireworks display." Nagaoka is famous for the fireworks display held in August. It is one of the three biggest fireworks displays in Japan. Every year a lot of people visit Nagaoka to see about 20,000 beautiful *fireworks. Saki talked with Mrs. Kimura about a lot of things and had a very good time. *On the way home from the city community center, Saki suddenly remembered the fireworks display she saw with her grandmother.

(2)

Saki couldn't say anything to her grandmother. She knew very well that her grandmother felt

sad. But Saki couldn't find words to *comfort her. They didn't talk and kept looking at the fireworks.

After a week, Saki received a postcard with a beautiful picture from Mrs. Kimura. When Saki said good-bye to Mrs. Kimura that day, the old lady asked Saki to give her Saki's *address. Mrs. Kimura said that she wanted to send a thank-you letter to Saki. Saki thought, "Oh! I've found another lady who likes to write letters!" and she smiled. On the postcard, there was a beautiful picture painted by Mrs. Kimura. It was a beautiful big firework. There was also one short message under the firework. It said, "That beautiful fireworks display in my memory." Saki knew that this kind of postcard was called *etegami*. That day, Mrs. Kimura said to Saki, "I take an *etegami* class at the city community center every Saturday." Saki received *etegami* for the first time and she was moved by the picture and the words. Saki thought, "I'm sure Mrs. Kimura really enjoyed talking with me. So she showed me her feelings in the *form of a beautiful picture and a short message." The postcard made Saki really happy. She suddenly got interested in *etegami*. She thought, "I'm not so good at drawing pictures. But can I make *etegami*? ⁽³⁾ If I send *etegami* to Grandma, will she be glad?"

Next Saturday, Saki visited the city community center. She wanted to meet Mrs. Kimura again. The *etegami* class was held in one of the rooms there. When Saki entered the room, there were about ten people. They were making *etegami* and using a lot of kinds of *paints and *painting brushes. Saki found Mrs. Kimura and said to her, "Thank you for your beautiful *etegami*. I was really happy to receive your postcard." Mrs. Kimura looked happy to see Saki again and showed Saki a lot of *etegami* postcards made by the students of this class. *According to four seasons, the *colorful pictures were on the wall. Saki enjoyed seeing those pictures. Some short and simple words were written on every *etegami* postcard. For example, next to a big bright orange flower, a short message was written. It said, "I love adventures!" Saki felt excited to see the picture. Then Saki said to Mrs. Kimura, "I want to make *etegami* and send it to my grandmother in Nagaoka. But I'm not so good at drawing pictures. I don't have any paints or painting brushes for making *etegami* like yours." Mrs. Kimura smiled at Saki and started to talk about the way to make *etegami*. "You don't have to buy anything special when you make *etegami*. If you have *colored pencils, you can use them. You don't have to be good at drawing pictures, Saki-chan. You ⁽⁴⁾ ① and ② a picture ③ add ④ you ⑤ draw ⑥ to ⑦ like ⑧ can ⑨ some words] the picture. Your grandma will understand how much you love her if you send it to her."

At home, Saki asked her mother to give her a postcard. Saki remembered Mrs. Kimura's words. She said, "First, choose one thing you want to draw. Then write the words you really want to tell your grandma." Saki asked herself, "What do I really want to tell Grandma?" Saki also wanted to draw a picture of the fireworks display in Nagaoka. With her colored pencils, she drew a big firework in the center of the postcard. Under it, she drew two small people. They were Saki and her grandmother. The two were looking at the beautiful

firework together. ⁽⁵⁾ The picture was not so good, but she *was satisfied with it. Saki remembered Mrs. Kimura's words, "The most important thing is to send your message to her – you always think of her." Just under the firework, Saki wrote, "My heart is always with you." When Saki found her grandmother was crying quietly that night, she couldn't say anything to her. She thought, "(6)". I will send her this message with the picture. This is my way to *express my love for her."

When Saki's grandmother received the postcard, she was really glad. In her letter, she thanked Saki for her first *etegami*. She said that she felt a wonderful warm feeling to see Saki's *etegami*. Saki also had a warm feeling to read her grandmother's letter.

Now, in February, it is really cold, but Saki can find some *signs of spring. "The *buds of *ume* trees are getting big! Spring is slowly coming."

When she goes to and from school, she can sometimes find small changes of the seasons. Maybe she is looking for things she wants to draw in her next *etegami* to her grandmother.

〔注〕 transfer 転勤させる	by hand 直筆で
neighborhood 近所	smartphone スマートフォン
city community center 市の公民館	fireworks display 花火大会
firework 花火	on the way home 帰宅途中
comfort 慰める	address 住所
form 形	paint 絵の具
painting brush 絵筆	according to ~ ~に応じて
colorful 色とりどりの	colored pencil 色鉛筆
be satisfied with ~ ~に満足する	express 表現する
sign きざし	bud つぼみ

〔問 1〕 ⁽¹⁾ Grandma sends me letters too often! とあるが、このように Saki が思った理由を最もよく表しているものは次の中ではどれか。

- ア Saki feels a little angry with her grandmother because she doesn't have enough time to write back to her grandmother.
- イ Saki feels a little sorry for her grandmother because she doesn't have many friends to send letters.
- ウ Saki feels a little sad because her grandmother writes only about herself and she doesn't ask anything about Saki.
- エ Saki feels a little happy because her grandmother writes a lot of letters to Saki and worries about her.

〔問 2〕 (2) の中には次の A ~ D が入る。本文の流れに合うように正しく並べかえたとき、その組み合わせとして最も適切なものは、下のア~カの中ではどれか。

- A Her grandmother didn't say anything, so Saki turned her eyes to her grandmother, and found that she was crying.
- B Her grandmother sat next to Saki, and they enjoyed watching a lot of beautiful fireworks.
- C Saki and her family went to see the fireworks display before they moved to Tokyo.
- D Saki talked to her grandmother, "Look, Grandma! They are like beautiful flowers in the sky!"

- ア B→A→C→D イ B→C→D→A ウ C→A→D→B
 エ C→B→D→A オ D→A→C→B カ D→B→A→C

〔問 3〕 ⁽³⁾ If I send *etegami* to Grandma, will she be glad? とあるが、このように Saki が思った理由を最もよく表しているものは次の中ではどれか。

- ア Saki wanted to tell how much she loved her grandmother in *etegami* to her.
- イ Saki wanted to show her skill of drawing pictures to her grandmother.
- ウ Saki wanted Mrs. Kimura to make beautiful *etegami* and give it to her grandmother.
- エ Saki wanted her grandmother to write shorter letters to Saki than now.

〔問 4〕 ⁽⁴⁾ 【 ① and ② a picture ③ add ④ you ⑤ draw ⑥ to ⑦ like ⑧ can ⑨ some words 】 とあるが、本文の流れに合うように、【 】内の単語・語句を正しく並べかえたとき、【 】内で 2 番目と 4 番目と 6 番目にくるものの組み合わせとして最も適切なものは次のア~カの中ではどれか。

	2 番目	4 番目	6 番目
ア	②	①	④
イ	②	④	⑥
ウ	⑤	④	①
エ	⑤	⑦	⑥
オ	⑦	③	①
カ	⑦	⑤	④

〔問5〕 ⁽⁵⁾The picture とあるが、Saki の描いた絵手紙を正しく表しているものは次の
中ではどれか。

ア



イ



ウ



エ



〔問6〕 本文の流れに合うように、 に英語を入れるとき、最も適切なものは次の中ではどれか。

- ア These are the words Grandma wrote to me in her letter
- イ These are the words I wanted to tell Grandma that night
- ウ These are the words Grandma told me that night
- エ These are the words Mrs. Kimura told me to write on my *etegami*

〔問7〕 本文の内容と合っているものを、次のア～キの中から二つ選びなさい。

- ア Saki likes to write letters to her grandmother and always tells her about her school life.
- イ When Saki wants to send messages to her friends, she usually uses her smartphone.
- ウ When Saki met Mrs. Kimura, she found Mrs. Kimura also came from Nagaoka.
- エ Mrs. Kimura taught the students of an *etegami* class at the city community center every week.
- オ Mrs. Kimura told Saki to buy some special painting brushes for making *etegami*.
- カ Saki was satisfied with her first *etegami* though she was not good at drawing pictures.
- キ Saki stopped making *etegami* after sending the first *etegami* to her grandmother.

〔問8〕 次の質問に対するあなたの考えを理由などを含めて **40 語以上 50 語程度の英語**で述べなさい。「,」「.」「!」「?」などは語数に含めません。これらの符号は、解答用紙の下線部と下線部の間に入れなさい。

What are some good points of writing letters by hand?

