

英語

(50 分)

I 次の問い(問1~問10)の空欄に入れるのに最も適切なものを、①~④の中からそれぞれ1つ選び、解答番号①~⑩にマークしなさい。

問1 Paula always remembered the teacher who showed her ① on the first day of school.

- ① kind ② kinder ③ kindly ④ kindness

問2 I ② tired, so let's watch the rest of the movie tomorrow.

- ① am getting ② get to ③ have to get ④ will have gotten

問3 ③ the door, so the cat doesn't go outside!

- ① Having shut ② Shut ③ Shutting ④ To shut

問4 I didn't know ④ to do when I lost my phone.

- ① how ② that ③ what ④ where

問5 Michael ⑤ before his job interview.

- ① cutting his hair ② had his hair cut ③ having cut his hair ④ to get a haircut

問6 They decided to sit outside ⑥ it was cold that evening.

- ① besides ② even though ③ rather ④ whether

問7 We ⑦ about going to the park, but then it began to rain.

- ① are going to think ② had been thinking ③ have to think ④ must think

問8 You want to go shopping today, ⑧ you?

- ① aren't ② can't ③ don't ④ shouldn't

問9 At the library, you are allowed ⑨ up to ten books.

- ① checking out ② check it out ③ check out ④ to check out

問10 We should leave early ⑩ in case there is a lot of traffic.

- ① for ② just ③ of ④ which

II 次の問いに答えなさい。

問1 次の会話中の空欄に入れるのに最も適切なものを、①~④の中からそれぞれ1つ選び、

解答番号⑪~⑭にマークしなさい。

(1) Ken: I can't believe how much food we have left over.

Sara: I know. ⑪

Ken: Next time, we should confirm they are coming before we buy anything.

- ① I expected twice as many people.
② More people should be here in an hour.
③ There's hardly enough room for everyone.
④ We should start getting ready.

(2) Mona: I love that book. Have you read anything else by that author?

Ray: ⑫

Mona: I really loved her first novel. You can borrow it if you like that one.

- ① No, I don't know who she is.
② No, what else do you recommend?
③ Yes, I enjoyed her first novel.
④ Yes, what did you like about her latest novel?

(3) Emily: Do you know when Professor Kline has office hours?

Simon: Well, it's supposed to be Tuesday afternoons, ⑬

Emily: That's so annoying! I guess I'll email to see when we can meet.

- ① because I just saw him.
② but he is never there.
③ since he is not on campus then.
④ while the offices are open.

(4) Greg: What do you think of this coat? It's pretty nice, isn't it?

Fiona: It is nice, but weren't you just talking about trying to save some money?

Greg: You're right. I do need to save money. (14)

- ① I can always buy it tomorrow.
- ② We can find one the right size.
- ③ What I'm wearing will last another season.
- ④ You said you needed a coat.

問2 次の会話を読み、質問や問題の答えとして最も適切なものを、①～④の中からそれぞれ1つ選び、解答番号(15)～(17)にマークしなさい。

Kathy: Hi, can I drop off my application with you?

Bob: Sure. Actually, if you have a few minutes, we can talk about it right now. I remember you came in last week and talked to me.

Kathy: That's right. Yes, I'd be happy to talk to you now.

Bob: OK, I see you have a bit of experience in food service. Tell me about working at Seaside Café.

Kathy: I started off as a host, but later I began waiting tables. I really like working there, but they are busy only in the summer, and I want to work more hours.

Bob: They get really busy in the summertime with all the tourists, but we tend to get mostly locals, so business is more consistent here. Do you have any problem with working late?

Kathy: No, I'm taking classes that end at 4:00, so I'm looking for night shifts.

Bob: Right now, I only have a few shifts available, but it would be fine with me if you continued on at Seaside Café as well. If things open up here and you do a good job, you could come in more nights.

Kathy: That's great. Would I be able to start next week?

Bob: That would be fine. Email me your current work schedule and I'll add you on here. First, you'll be following another waiter and learning how we do things here. How long just depends on how quickly you pick things up.

Kathy: Great! I'll be sure to send you my schedule by tomorrow.

(1) What is the purpose of the conversation? (15)

- ① to interview for a job

② to learn about a local restaurant

③ to make a reservation

④ to train a new employee

(2) Why does Kathy want to leave her current job? (16)

- ① It is far from her house.
- ② It is not very busy now.
- ③ She does not like her boss.
- ④ She will be going to college.

(3) What does Bob suggest that Kathy do? (17)

- ① get more experience before applying
- ② return to speak to the owner
- ③ start working the next day
- ④ work at both restaurants

問3 次の会話を読み、質問や問題の答えとして最も適切なものを、①～④の中からそれぞれ1つ選び、解答番号(18)～(20)にマークしなさい。

Tyler: Professor Fenton, do you have a few minutes?

Professor Fenton: Yes, but just a few. I have lots of people coming in to talk about their midterm grades. My office hours are completely booked up.

Tyler: Well, I'm really struggling with this group project. We just don't seem to work well together.

Professor Fenton: This happens every year. This is a group presentation because it helps prepare you for working in the real world. You'll have to collaborate with other people when you have a job.

Tyler: I know, but it seems like with work and class it's really difficult to find time to meet and get started.

Professor Fenton: Since you seem to be organized and want to get things done, I'd say you should act as a leader. Email the group members and suggest the different tasks each person can do. They may be happy to have someone making decisions.

Tyler: Thanks, I didn't know how people would react, but that sounds like a good

idea. Any other advice?

Professor Fenton: I'd suggest you start doing research for the project. You could then pass off your notes to the other group members and they can work on making slides and organizing the presentation.

Tyler: Thanks. I think I'll head straight to the library after this and get started.

Professor Fenton: Just in case, you might want to send that message first to make sure no one has started doing any research. There's no point in doing what someone has already completed.

Tyler: Oh, good idea. Thanks again for your time.

(1) What is the purpose of the conversation? (18)

- ① to ask for time to finish a project
- ② to borrow some materials
- ③ to gather information about a class
- ④ to get help with a problem

(2) Why is Professor Fenton in a hurry? (19)

- ① She does not feel well.
- ② She has to teach a class.
- ③ She is meeting other students.
- ④ She must attend a meeting.

(3) What will Tyler probably do next? (20)

- ① borrow a book from the professor
- ② contact other students
- ③ go to the library
- ④ write his research paper

III 次の英文を読んで、下の問いに答えなさい。

Technology Use and the Elderly

Many children find themselves acting as technical support for aging parents and grandparents, who want to take advantage of online activities that will improve their quality of life, such as shopping, banking, and video messaging, but often find it difficult to master these tasks. The biggest issue is one of familiarity. Young, and even middle-aged people, have grown up with cell phones, laptops, and a variety of Internet services; older people find themselves having to learn about them for the first time and complain that devices and apps are not easy to use. When this becomes too much of a challenge, in fact, elderly people have been known to discard hardware out of frustration or delete apps they cannot master.

Much of the blame lies with technology companies themselves, as both hardware and software are generally designed by and for younger people. Corporations may give some thought to what older people want, but there is little hands-on feedback to designers from them. However, this shows a shortsightedness by tech companies, as the elderly represent a large — and growing — share of the market. So, because they do not find products designed for them, instead of purchasing the latest gadgets, older people often stick to basic flip phones or using simple programs, such as email.

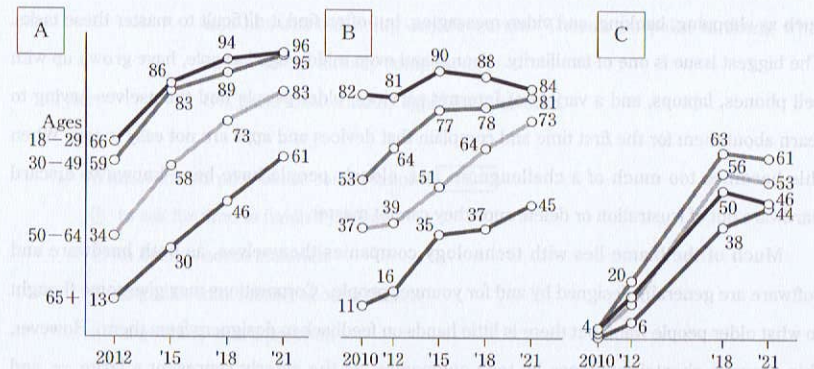
One area that is seeing some change is related to health care. More elderly people wish to stay in their homes rather than live in nursing homes. Health-care tech that can monitor a person's vital signs and send health information to doctors' offices are one way to improve the quality of life of elderly people.

And while older people use technology less than all other age groups, they are catching up in a number of areas. One surprise is in the use of tablets. There is a less than 20 percent difference in tablet ownership rates between the youngest and oldest users. Overall, more elderly people use cell phones than tablets, but they have nowhere near the usage rates of young people. The use of social media is close to that of tablet use, which makes sense, as many social media accounts are easy to access via tablet, and communication with loved ones is a primary desire for many elderly people.

Social media does, however, pose certain dangers to older people, who are more likely to fall for phishing scams* in which people try to obtain personal information via social media accounts. To combat this, some experts suggest offering basic tech literacy classes for elderly people at community centers. By learning with other older people, individuals will not feel left behind and

may be more comfortable asking questions. It has the additional benefit of being a social activity that gets people out of their homes and interacting with other people. Many elderly people fear the isolation that often accompanies old age, but some simple changes can make technology a valuable tool to combat this problem.

*フィッシング詐欺



Note: Respondents who did not give an answer are not shown.
Source: Survey of U.S. adults conducted Jan. 25–Feb. 8, 2021.

PEW RESEARCH CENTER

問 1 Which of the following benefits of elderly people being familiar with tech is described in the story? (21)

- ① They can go back to work to earn money.
- ② They can help others with tech problems.
- ③ They can stay in their homes longer.
- ④ They can teach classes about technology.

問 2 According to the essay, what is a benefit of having technology classes at community centers? (22)

- ① Elderly people can get exercise by leaving the house.
- ② Elderly people can interact with one another.
- ③ The teachers are trained to work with elderly people.
- ④ The training is paid for by the city government.

問 3 What problem does social media cause for some elderly people? (23)

- ① It keeps them from seeing people face to face.
- ② Older people often forget their passwords.
- ③ People might use it to steal their identities.
- ④ They need reminders concerning how to post messages.

問 4 In the last paragraph, what does “it” refer to? (24)

- ① making social media accounts
- ② buying tech products
- ③ meeting people
- ④ taking classes

問 5 Using information from the text and the graph, answer the following question:

What type of technology is represented in graph A? (25)

- ① healthcare apps
- ② smartphones
- ③ social media
- ④ tablets

Ⅳ 次の英文を読んで、下の問いに答えなさい。

Most countries have environmental laws which aim to limit the amount of harm that can be done to an ecosystem. For example, activities such as mining are generally restricted to particular areas where they will not have a negative effect on human populations, or factories are allowed to release only a certain amount of pollutants. These laws generally balance humans' need for resources — water and power, for example — with the harm that is caused by collecting them.

Some people believe that these environmental laws do not do enough. Instead, they argue, what is needed are stricter “Rights of Nature” laws, which give legal personhood to ecosystems. Giving “personhood” to ecosystems does not mean that they are literally thought of as people. Rather, legal personhood gives rights to nature that are usually held by human beings, such as the right to live and prosper. Instead of limiting what owners can do on their land, Rights of Nature laws grant certain ecosystems the right to live free from harm. Those who support the idea of the Rights of Nature believe these laws will protect ecosystems in ways current laws

cannot, primarily because they focus on the rights of the ecosystem itself, not on the rights of an ecosystem's owner.

Rights of Nature laws have been passed at both the local and national level in several countries, and the results have been a mixed bag. In the United States, a number of lawsuits based on the concept of Rights of Nature have been dismissed. In Ecuador, a country in South America, natural resources such as rivers have specific rights. There, any person or group can start a lawsuit to protect natural spaces. This could be done to protect a space from pollution or development, such as building roads. In Ecuador, a Rights of Nature law is part of the country's constitution. Since its passing, courts there have made a number of rulings based on it that have protected local ecosystems.

While protecting the environment is important, in reality, for civilizations to exist, some resources must be extracted, which generally causes harm to some degree. How then can these competing interests be balanced? For example, cities need water to survive. What if someone feels too much water is being taken from a nearby lake, affecting its "right to live"? Are the rights of an ecosystem more important than the rights of local citizens? Some worry these laws would make already hard to find resources more difficult to extract, and therefore, more expensive.

Those who oppose these laws argue they are nothing more than symbolic measures meant to make people feel good. Many nations already have strict laws that limit activities that could cause environmental harm, making Rights of Nature laws unnecessary. While this may be too harsh of a judgment, it is true that these laws need to be better defined. This will reduce the number of cases that are rejected by the court.

If this can be done, they may become one of many valuable ways to protect the environment.

Sources:

1. Ecuador's High Court Rules Wild Animals Have Legal Rights
<https://www.smithsonianmag.com/smart-news/ecuadors-high-court-recognizes-that-wild-animals-have-legal-rights-180979862/>
2. The Rights of Nature — Can an Ecosystem Bear Legal Rights?
<https://news.climate.columbia.edu/2021/04/22/rights-of-nature-lawsuits>
3. "Rights of Nature FAQ"
<https://www.ijc.org/system/files/commentfiles/2019-10-Nicolette%20Slagle/FAQ.pdf>
4. Environmental Personhood: A Radical Approach to Climate Justice
<https://nonprofitquarterly.org/environmental-personhood-a-radical-approach-to-climate-justice/>

問 1 What is the main purpose of the essay? (26)

- ① to describe how the environment is protected in South America
- ② to explain the importance of natural resources
- ③ to present the pros and cons of an environmental law

問 2 ④ to show how an unpopular environmental law was passed

問 2 According to the article, what is a problem with typical environmental laws? (27)

- ① They allow anyone to start a lawsuit.
- ② They do not have strict penalties.
- ③ They focus on an ecosystem's owners.
- ④ They protect only certain types of ecosystems.

問 3 In the fourth paragraph, why does the author mention a lake? (28)

- ① to describe the need for stronger environmental laws
- ② to explain that communities need natural resources
- ③ to show how a fragile ecosystem was protected
- ④ to show how natural resources are harmed by large companies

問 4 What is the author's opinion of Rights of Nature laws? (29)

- ① They are one of several ways to help the environment.
- ② They do not do enough to punish people who pollute the environment.
- ③ They have not been successful anywhere.
- ④ They should replace current environmental laws.

問 5 Which of the following would be the best title for the essay? (30)

- ① Giving Legal Rights to the Environment
- ② Why Countries Must Protect the Environment
- ③ Changing Rights of Nature Laws
- ④ How New Laws Protect Lakes

V 次の日本語と英文がほぼ同じ意味になるように、下の語句を並べかえて空欄を補い、文を完成させなさい。その際、それぞれ 3 番目と 6 番目に来る番号を選び、解答番号 ③① ~ ④① にマークしなさい。なお、文頭に来る語も小文字となっています。

問 1 いつも遅刻してくる人達にはどうしたら良いのでしょうか？

What _____ ③① _____ ③② _____ late?

- ① be done ② should ③ people ④ who ⑤ always ⑥ are
⑦ about

問 2 天気の良い日に外にいることほど、素晴らしいことはない。

_____ ③③ _____ ③④ _____ beautiful day.

- ① better ② than being ③ nothing ④ outside ⑤ is ⑥ there
⑦ on a

問 3 そこに時間通りに行くには、もっと早い電車に乗るべきだ。

_____ ③⑤ _____ ③⑥ _____ train.

- ① to ② there ③ get ④ you should ⑤ on time ⑥ take
⑦ an earlier

問 4 誰かがケリーは今日帰ってくると言っていた。

_____ ③⑦ _____ ③⑧ _____ today.

- ① me ② home ③ somebody ④ Kelly ⑤ was coming ⑥ that
⑦ told

問 5 どうしてその窓が一晩中開けっ放しになっていたのか、誰も知らない。

Nobody _____ ③⑨ _____ ④① _____ night.

- ① the window ② was ③ why ④ left ⑤ all ⑥ open ⑦ knows

数学

(50 分)

数学の解答欄への記入方法

問題文の 中の解答番号に対応する答えをマークシート上の解答欄の中から 1 つだけ選びマークしてください。

特に指示がないかぎり、符号 (－, ±) 又は数字 (0～9) が入ります。①, ②, … の一つ一つは、これらのいずれか一つに対応します。それらを解答用紙の①, ②, … で示された解答欄にマークして答えてください。

例 1. ①② に－5 と答えるとき

①	0000000000●0
②	00000●000000

例 2. ③④ に $-\frac{2}{3}$ と答えるときのように、解答が分数形で求められた場合、既約分数で答えてください。符号は分子につけ、分母にはつけません。(もし答えが整数であるときは分母は 1 とします。)

③	0000000000●0
④	00●000000000
⑤	000●00000000

小数の形で解答する場合、指定された桁数の一つ下の桁を四捨五入して答えてください。また、必要に応じて、指定された桁まで 0 にマークしてください。

例えば、⑥, ⑦⑧ に 2.5 と答えたいときは、2.50 として答えてください。

根号を含む形で解答する場合、根号の中に現れる自然数が最小となる形で答えてください。

例えば、⑨ $\sqrt{\text{⑩}}$ に $4\sqrt{2}$ と答えるところを、 $2\sqrt{8}$ のように答えてはいけません。

根号を含む分数形で解答する場合、例えば $\frac{\text{⑪} + \text{⑫} \sqrt{\text{⑬}}}{\text{⑭}}$ に $\frac{3+2\sqrt{2}}{2}$

と答えるところを、 $\frac{6+4\sqrt{2}}{4}$ や $\frac{6+2\sqrt{8}}{4}$ のように答えてはいけません。