英語(工学部・情報科学部・知的財産学部)

| Ι | 次の会話を読み、下記の設問に答えよ。(配点 25) |
|-------|---|
| Nate: | Hi, Rie! You're going to Misuzu's wedding, right? |
| Rie: | Yes! I can't wait! Aren't you guys performing at the party? |
| Nate: | Actually, that's what I wanted to talk to you about. We're going to sing a song, |
| | but we need people to help us. Can you sing? |
| Rie: | Er, not really. I'm such a terrible singer! There's no way I can sing in front of |
| | other people. I think I'd ruin Misuzu's wedding! |
| Nate: | Ha! Well, we're also looking for people to join in with instruments during the |
| | performance. 1 |
| Rie: | I'm sorry, but I don't know how to play any musical instruments, Nate. I don't |
| | think I can help you. |
| Nate: | Oh no, we're not thinking of anything too difficult. Just simple instruments like |
| | tambourines and maracas. Anyone can play those. We really need your help! |
| Rie: | Okay, I suppose I can. |
| Nate: | Great! Thank you so much! And you won't have to play for the whole song. |
| | We're hoping for the people playing the instruments to join in halfway through |
| | as a surprise. And you won't be playing alone, either. Jun and Mark are going |
| | to be playing with you. |
| Rie: | That sounds less scary! Will there be time to practice together? |
| Nate: | Of course! We're going to practice on Sunday next week in the park near my |
| | house. Around two o'clock. Can you make it? |
| Rie: | Actually, I have an appointment that afternoon, so I'll probably be about thirty |
| | minutes late. Is that okay? |
| Nate: | No problem. By the way, we're planning to sing "All You Need Is Love" by The |
| | Beatles. Do you know it? |
| Rie: | Yes! The Beatles are one of my favorite bands. I don't go to karaoke anymore, |
| | but in junior high school I 2 that song all the time! |
| | |
| | |

| (1) 空所 1 と 2 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。 | |
| 1 ① Can I help you? | ② Could you do that? |
| 3 Did you have time? | 4 Will you go there? |
| 2 ① was using to sing | 2 have sung |
| ③ used to sing | 4 was used to sing |
| (2) 会話の内容に合うように、次の英文の空所に入れ | 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。 | |
| Nate thinks that 3. | |
| $\widehat{\mathbb{I}}$ maracas are not complex instruments and | so are easy to play for everyone |
| ② the performance might be too difficult for | the group and should be simpler |
| 3 Rie should sing with other people because | it will boost her confidence |
| 4 Rie might be nervous because Jun and Ma | ark are very talented |
| (3) 会話の内容に合うように,次の1)と2)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 of the following statements is true? | 4 |
| ① Two people will play musical instruments | during the performance. |
| ② Misuzu has requested Rie to perform during | ng the party. |
| 3 Only some of the performers will start from | m the beginning of the song. |
| 4 Rie had no plans for Sunday before talkin | g to Nate. |
| 2) By the end of the conversation, what have | Nate and Rie agreed? 5 |
| ① Rie will go to karaoke to practice her timi | ing before the performance. |
| 2 Rie will sing a song by The Beatles during | g the performance. |
| 3 Rie will organize the practice session for t | he performance. |
| 4 Rie will play a musical instrument during | the performance. |

Π

From: diaz.gabriela@dd.ccb.com

To: yamakawa-s@amamioshimadiving.com

Subject: Arrangements for filming

Dear Mr. Yamakawa,

Thank you very much for agreeing to help us shoot the puffer fish nests in Amami Oshima. We hope that this film will be used in a nature documentary to be broadcast on the CCB network here in Spain.

We understand that the best times to observe the fish making the nests are from late June to mid-July. Given this, we are planning to arrive in Amami Oshima in mid-June. This is because we will require some time to check out the area and adjust our cameras, lighting, etc. Would you be able to provide us with some recommendations for accommodation on the island? There will be four crew members, including one translator, and we have an accommodation budget of 10,000 yen per person per night. Is this possible?

We are hoping that you and your staff will be able to take us out on a boat and show us where the nests can be found. We will be able to pay you and your crew members a daily fee, plus pay for any other expenses such as boat hire and food and drink during the times we are working together.

We will be bringing most of the equipment that we need with us, but we would like to buy some of the heavier items, once we get to the island. We will use a pipe to make a camera stand so that we can take an overhead shot of a nest. Also, please assist us in obtaining a special permit to film in the waters around Amami Oshima.

9 In your previous email, you asked whether . Three of our crew hold valid scuba diving licenses and are very experienced divers. We will meet our translator in Tokyo before we leave for Amami Oshima. He does not have a license, but it is not necessary for him to dive with the rest of the filming crew.

Best wishes,

Gabriela Diaz (Ms.)

CCB Documentary Division

| (1 | 下線部 "observe"とほぼ同じ意味の語を次の中から1つ選び,その番号をマークせよ。 |
|--------------|---|
| | 6 |
| | 1 prepare 2 watch 3 manage 4 capture |
| (2) | 本文の内容に合うように、次の1)と2)の問いの答えとして最も適切なものを下記の「 |
| | からそれぞれ1つ選び、その番号をマークせよ。 |
| 1 | Which of the following statements is true? 7 |
| | ① CCB will pay Mr. Yamakawa's team 10,000 yen per night. |
| | ② Ms. Diaz expects Mr. Yamakawa's team to construct a camera stand. |
| | 3 CCB will pay Mr. Yamakawa's team a daily amount and cover some other |
| | costs. |
| | 4 Mr. Yamakawa must tell CCB how much food and drink will be needed. |
| 2 |) Which of the following things does Ms. Diaz \underline{not} ask Mr. Yamakawa to hel |
| | with? 8 |
| | ① Finding a place to stay |
| | 2 Translating the license application |
| | 3 Locating the puffer fish nests |
| | 4 Getting permission to film |
| (3) | 空所 9 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 all of our crew can dive ② we will need translation services |
| | 3 we will arrive in Tokyo first 4 we have visited Amami Oshima before |
| (4) | 本文の内容に合うように、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つ過 |
| | び、その番号をマークせよ。 |
| \mathbf{T} | nis email is probably from 10 . |
| | ① a translator to the manager of a travel company in Amami Oshima |
| | 2 a tourist hoping to learn how to dive to the head of a diving school |
| | 3 a person working for a television channel to the director of a diving company |

次は、気象庁が発表している火山の噴火警戒レベルとそれに対する地方自治体の対応に関する新聞記事である。英文と図表を参照し、下記の設問に答えよ。(配点 25)

Of the total of 110 active volcanoes in the nation, a committee of the Japan Meteorological Agency identified 47 volcanoes in June 2009 that have the possibility of eruption within about a century and therefore need stronger observation.

The 47 volcanoes are 11 24-hour watch by the agency's <u>four volcanic monitoring centers</u> established in its Tokyo headquarters and three other district observatories in Sapporo, Sendai and Fukuoka. The four centers observe such factors as the number of volcanic earthquakes and the expansion of mountains by using GPS and a seismograph, an instrument that measures and records the movement of the earth. In the hope of preventing the loss of human lives, they will report the information to prefectural governments.

The prefectural governments have set up volcano disaster management councils and applied a system of Volcanic Alert Levels to 30 out of the 47 volcanoes. The 5-level system provides local residents and climbers with information about the likelihood and potential severity of an eruption. Along with the alert level system, the governments are also

| Volcanic Alert Levels | | | | | | |
|-----------------------|-------------------------|--|--|--|--|--|
| 5 | Evacuate | | | | | |
| 4 | Prepare to evacuate | | | | | |
| 3 | Do not approach volcano | | | | | |
| 2 | Do not approach crater | | | | | |
| 1 | Normal | | | | | |

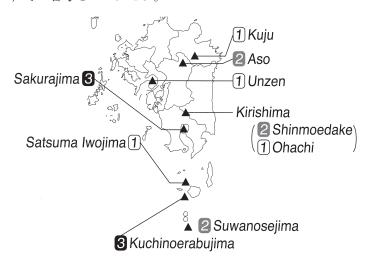
required to inform cities and towns about 12 to respond to volcanic activities of different levels. For example, the Alert Level for Mt. Aso in Kumamoto Prefecture rose to 2 from 1 in 2014, meaning that people should not approach its craters.

Most of the remaining 17 volcanoes have not erupted in recent years, so the local governments responsible for them do not have management councils and have not applied the alert system. The Meteorological Agency is encouraging those local governments to establish the councils.

("Alert level system applied to 30 volcanoes." The Japan News. 1 Oct. 2014)

(1) 空所 11 と 12 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。
 11 ① under ② below ③ up ④ above
 12 ① which ② what ③ how ④ whom

- (2) 下線部 "four volcanic monitoring centers" が行う業務として、本文に述べられている ものを次の中から1つ選び、その番号をマークせよ。 **13**
 - ① 活火山であることの認定
 - ② 活火山への登山者数のカウント
 - ③ 地方自治体への火山活動情報の提供
 - ④ 火山防災協議会の立ち上げ
- (3) 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。 14
 - ① 2009年6月に、110の活火山が100年以内に噴火する可能性があると認定された。
 - ② 現在,30の火山が火山監視情報センターに24時間監視されている。
 - ③ 熊本県にある阿蘇山の噴火警戒レベルは、2014年に2から1へ変更された。
 - ④ 火山監視情報センターが監視する火山のうち17に対しては、噴火警戒システムが適用されていない。
- (4) 次の図は、2014年10月の時点で、噴火警戒レベルが発令されている九州の活火山を示したものである。図を参照し、下記の英文の空所 15 に入る最も適切なものを選択肢の中から1つ選び、その番号をマークせよ。



Volcanic Alert Levels in Kyushu as of Oct. 2014

As of October 2014, 15

- 1 the number of volcanoes in Kyushu which were most likely to erupt was three
- ② the number of volcanoes at Alert Level 1 was less than the total number of volcanoes at Alert Levels 2 and 3
- 3 the total number of volcanoes at Alert Levels 2 and 3 was more than five
- 4 the number of volcanoes at Alert Level 3 was no less than that of the volcanoes at Alert Level 1

IV

Air ambulances are special helicopters carrying doctors and nurses with medical equipment to places where medical help is required, or transporting patients in cases of emergency. The helicopters have achieved significant results, such as improving patient survival rates, by offering prompt primary care and shorter transportation times. They are also expected to be $\frac{\text{used}}{1)}$ in the event of large-scale disasters. On the other hand, there are issues triggered by the increasing demand, such as costs and a shortage of pilots.

In December 2014, a hotline call from a fire department came through to a medical university hospital in Chiba Prefecture. A helicopter was requested for a man in his 60s in Ichihara, who was suspected of having suffered a stroke. Staff, including a doctor and a nurse, ran to the hospital's heliport. Three minutes later, the helicopter took 17, and another 18 minutes later, it landed about 37 kilometers away in a school field in Ichihara. The patient, who had been carried to the field, was put in the helicopter, where he received primary treatment, and transported to a medical institution in the city.

The university hospital introduced the air ambulance in October 2001. It was mobilized 1,053 times in 2013, or about 2.3 times as often as in 2002. A doctor at the hospital said, "Patients' lives and whether they will suffer any permanent damage depend on how soon doctors can treat them." In April 2014, the doctor was flown out to a scene where a 20-year-old university student had had a motorcycle accident while traveling to her part-time job. He treated her as she complained of stomach pain in the helicopter while it was going back to the hospital. Though her internal injury was serious, it was treated successfully 18 the speed of the helicopter, which meant surgery was conducted without delay upon her arrival at the hospital. She has recovered sufficiently to go about her daily life without difficulty. She looked back at that time, saying, "If it had not been for the helicopter, I 19 ."

The central government began considering increasing the number of air ambulances after the 1995 Great Hanshin Earthquake, in which land traffic networks were disrupted, according to a Tokyo-based nonprofit organization that promotes an emergency medical network of helicopters and hospitals. Trial operations started in 1999, and the helicopters went into full service in 2001. A study by the organization shows that the use of air ambulances raised the patient survival rate by more than 30 percent compared to conventional emergency care involving transport over land, and the number of patients who fully recovered increased by about 50 percent.

Currently, 43 helicopters are deployed in 36 prefectures. According to the Japanese

Society for Aeromedical Services, which promotes the use of air ambulances, the number of flights undertaken across the nation soared from 2,302 in 2002 to 20,632 in 2013.

The chairman of the society said, "(\mathcal{T}) flights has been increasing as the necessity of air ambulances becomes widely recognized. This increase is also partly due to increased (\mathcal{T}) across neighboring prefectures between medical institutions and fire services."

Such growing demand for air ambulances raises a new issue. The central and prefectural governments pay annual operational costs of about \(\frac{1}{2}\)200 million per helicopter to private companies to which hospitals have entrusted the operation of the helicopters. In many cases, however, the increased number of flights means greater fuel costs, and the companies must cover the excess.

The supply of pilots for air ambulances is also tight. As air ambulances, which sometimes must land in urban areas, need to be operated with a high level of skill, pilots are required to have at least 2,000 hours of flying experience, according to guidelines by the All Japan Air Transport and Service Association. It also costs more than \$10 million to acquire a helicopter pilot's license. These factors have contributed to a shortage of young pilots.

"There will likely be a growing shortage of pilots due to a lot of postwar baby boomers reaching retirement age and such," said a person in charge of air ambulances at the association. "We need to establish a good system to train young pilots."

("Shortage of pilots felt as 'doctor copters' take off." The Japan News. 25 Jan. 2015)

| (1) 下線部1) "us | sed"と文脈を変え | ずに置きかえり | うれる | る最も適切な語 | 吾を次 | の中から1つ |)選 |
|---------------|-------------|-------------|---------|--------------|------------|-----------|----|
| び、その番号をつ | マークせよ。 1 | 6 | | | | | |
| ① utilized | 2 possess | ed ③ fu | ılfille | ed 4 | pres | served | |
| (2) 空所 17 | ~ 19 に) | 入る最も適切な | もの | を次の中からそ | それそ | れ1つ選び, | そ |
| の番号をマークセ | せよ。 | | | | | | |
| 17 ① o | over 2 | off | 3 | care | 4) | advantage | |
| 18 ① in | nstead of ② | in favor of | 3 | thanks to | 4 | so as to | |
| 19 ① w | vill die | | 2 | might have d | lied | | |
| ③ h | nave died | | 4 | had died | | | |

- (3) 下線部2) "The university hospital" に関して、本文で述べられているものを次の中から1つ選び、その番号をマークせよ。 20
 - ① ドクターヘリ導入のきっかけは、心臓発作の男性患者を救助できなかったことだった。
 - ② 2014年に、千葉県市原市の医療機関から半径37キロメートル内にヘリポートの設置を要請した。
 - ③ 今後のドクターへリの出動増加に備えて、専門医の訓練を年に数回実施している。
 - ④ 2013年のドクターヘリの出動回数は、2002年と比較すると2倍以上になった。
- (4) 下線部3) "the doctor" に関して、本文で述べられているものを次の中から1つ選び、 その番号をマークせよ。
 - 1 He saw the accident by chance while he was riding his motorcycle.
 - ② He carried out a surgical operation in the helicopter because it would have been too late for surgery at the hospital.
 - 3 He gave the patient appropriate primary medical treatment in the helicopter on the way to the hospital.
 - ④ He returned to the university hospital by motorcycle right after the accident to transport the patient as soon as possible.
- (5) 下線部4) "a Tokyo-based nonprofit organization" に関して、本文で述べられている ものを次の中から1つ選び、その番号をマークせよ。 22
 - ① It asked the government to improve land traffic networks after the Great Hanshin Earthquake.
 - 2 It promotes an emergency network of medical institutions and patients.
 - 3 It studied the relationship between air ambulances and the patient survival rate.
 - ④ It promotes the conventional land transportation to save as many patients as possible.
- (6) 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。
 (ア) ー (イ)
 - ① A number of prediction
 - 2 A number of repetition
 - 3 The number of comparison
 - 4 The number of cooperation

- (7) 下線部 5) 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。 **24**
 - ① ドクターへリは、都市部に着陸しなければならない場合もあり、操縦には高度な技術が必要であるため、パイロットは最低2,000時間の飛行経験が求められる。
 - ② ドクターへりは、時には高度な技術を用いる手術を患者が受けるために都市部に着陸しなければならないので、パイロットは少なくとも2,000時間の飛行経験が必要である。
 - ③ ドクターへリは、時には都市部の空き地を使って高度な操縦技術を磨く必要があり、パイロットは最低2,000時間の飛行経験が求められる。
 - ④ ドクターへりは、都市部に着陸しなければならない場合もあり、その整備にも高度な技術が求められるため、パイロットは少なくとも2,000時間の飛行経験が必要である。
- (8) 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。 **25 26**
 - ① 大規模災害時の活用を主目的として、ドクターへリの導入が急がれている。
 - ② ある調査では、従来の地上での患者の搬送に比べて、ドクターへりによる搬送は救命率が30%以上高まることがわかった。
 - ③ ドクターヘリの年間運用費は、1機あたり2,000万円である。
 - ④ ドクターヘリの燃料費は各病院がまかなっているため、病院は赤字に悩んでいる。
 - ⑤ ヘリコプターのパイロット免許取得には1,000万円以上かかる。

Ⅴ 次の英文を読み、下記の設問に答えよ。(配点 20)

The "Tanabata" festival is most commonly held on July 7th in Japan, though it is celebrated in August in some areas. During the festival, people (① to ② on ③ write ④ wishes ⑤ their) narrow strips of colored paper called "Tanzaku" and hang them on bamboo trees with other ornaments. As the festival approaches, the decorated bamboo trees can be seen everywhere, showing that summer has finally arrived.

The history of Tanabata is very old. The oldest existing book of poetry, "Manyoshu," contains many poems about it. Tanabata is known as the story of "Orihime Boshi" and "Kengyu Boshi," or Vega and Altair. While there are many similar stories in other countries, the Japanese versions of the story (1) to be 2 said 3 includes 4 mixtures 5 are) of local beliefs and Chinese legends.

Despite there being many different versions of the Tanabata story in Japan, the following version is the most popular. Orihime and Kengyu fell in love with each other and were always together. The king of heaven, Orihime's father, got angry because the couple forgot to do their jobs. He separated them on opposite sides of "Amanogawa," or the Milky Way. Since then, (1) have 2 allowed 3 they 4 not 5 been to cross Amanogawa only once a year to meet each other on the day of the festival.

According to some stories, the couple can only meet when the weather on that day is fine. Other stories say that they can meet even when it is raining and the rain itself is considered to be the happy tears of Orihime. Whichever version of the story you believe, once a year all over the country, people look up at the sky and pray for the happiness of the couple.

(1) 下線部1)~3) を文脈に合うように並べかえる際,不必要なものが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。

(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。

30

- (1) Some Tanabata stories say that the rain represents Orihime's tears of sadness.
- 2 Since Orihime and Kengyu had neglected their work, they were kept apart.
- 3 Other than in Japan and China, the Tanabata story is unknown.
- 4) Tanabata decorations are no longer a common sight in summer.