

I 次の英文を読んで、問に答えなさい。

In the last few decades, people all over the world were told that humankind is on the path to equality, and that globalization and new technologies will help us get there sooner. (ア) Though globalization and the Internet bridge the gap between countries, they threaten to enlarge the gulf between classes, and just as humankind seems about to achieve global unification, the species itself might (a) divide into different biological *castes.

Inequality goes back to the Stone Age. Thirty thousand years ago, *hunter-gatherer bands buried some members in beautiful graves covered with thousands of ivory beads, bracelets, jewels and art objects, while other members had to (b) settle for a bare hole in the ground. Nevertheless, ancient hunter-gatherer bands were still more equal than any subsequent human society, because they had very little property. Property is a requirement for long-term inequality.

Following the Agricultural Revolution, property multiplied and with it inequality. As humans gained ownership of land, animals, plants and tools, rigid hierarchical societies emerged, in which small elites monopolized most wealth and power for generation after generation. Humans came to accept this arrangement as natural and even divinely *ordained. (イ) How can there be (c) order without a clear hierarchy between *aristocrats and *commoners, between men and women, or between parents and children? Priests, philosophers and poets all over the world patiently explained that just as in the human body not all members are equal — the feet must obey the head — so also in human society (A) _____.

In the late modern era, however, equality became an ideal in almost all human societies. It was partly due to the rise of the new ideologies of communism and liberalism. But it was also due to the Industrial Revolution, which made the masses more important than ever before. (ウ) Governments in both democracies and dictatorships invested heavily in the health, education and welfare of the masses, because they needed millions of healthy laborers to operate the production lines and millions of loyal soldiers to fight.

Consequently, the history of the twentieth century revolved to a large extent around the reduction of inequality between classes, races and genders. Though the world of the year 2000 still had its share of hierarchies, it was nevertheless a far more equal place than the world of 1900. (エ) In particular, they hoped that globalization would spread economic prosperity throughout the world, and that as a result people in India and Egypt will come to enjoy the same opportunities and privileges as people in Finland and Canada. An entire generation grew up on this promise.

Now it seems that this promise might not be (d) fulfilled. Globalization has certainly benefited

large segments of humanity, (B) _____ both between and within societies. Some groups increasingly monopolize the fruits of globalization, while billions are left behind. Already today, the richest 1 per cent owns half the world's wealth. Even more alarmingly, the richest hundred people together own more than the poorest 4 billion.

(Yuval Noah Harari, *21 Lessons for the 21st Century*, Vintage より抜粋、一部改変)

注

*caste 階級 *hunter-gatherer 狩猟採集生活者 *ordain 命ずる *aristocrat 貴族 *commoner 一般人

問1 下線部(a)の divide とほぼ同じ意味の表現を選び、番号で答えなさい。

- 1 allocate 2 separate 3 unite 4 glorify

問2 下線部(b)の settle for a bare hole in the ground の言い換えとして最も適切なものを選び、番号で答えなさい。

- 1 keep a high standard 2 lead a prosperous life
3 just survive simply 4 stay comfortable

問3 下線部 (c) の order とほぼ同じ意味の表現を選び、番号で答えなさい。

- 1 controlled situation 2 request
3 direction 4 indiscipline

問4 下線部 (d) の fulfilled とほぼ同じ意味の表現を選び、番号で答えなさい。

- 1 broken 2 interrupted 3 governed 4 kept

問5 空所 (ア) ~ (エ) を埋めるのに最も適切なものを、1~5 よりそれぞれ1つ選び、番号で答えなさい。ただし不要な選択肢が1つ含まれている。

1. In the first years of the twenty-first century people expected that the process of equality would continue and even accelerate.
2. In reality, the twenty-first century might create the most unequal societies in history.
3. Industrial economies relied on masses of common workers, while industrial armies relied on masses of common soldiers.
4. Hierarchy was not just the norm, but also the ideal.
5. It is important to establish a totally equal society at any cost.

問6 下に与えられた語 (句) を正しい順に並べ替え、下線部 (A)、(B) を埋めるのに、最も適切な表現を完成させなさい。解答用紙には3番目と5番目に来る語 (句) の番号を書きなさい。

- (A) 1 nothing 2 equality 3 will
4 chaos 5 but 6 bring
(B) 1 inequality 2 growing 3 there're
4 signs 5 but 6 of

II 次の新聞記事を読んで、問に答えなさい。

Artificial intelligence has worked its way into numerous business sectors *under the guise of improving efficiency, but in the medical field it promises to do even more: save lives. AI Medical Service, a Tokyo-based startup developing an AI-based *endoscopic diagnostic support system, is (a)convinced of the technology's capabilities and aims to prove its effectiveness.

*Gastrointestinal cancers are a major cause of cancer death worldwide — they (b)account for 1 in 3 such deaths globally — and the startup says this is largely due to an inability to detect them at an early stage.

Data compiled last year by the National Cancer Center Japan show that the five-year survival rates for patients with Stage 1 stomach cancer were over 90%. But the rates plunge for those with Stage 3 or 4, standing at around 40% and 6.5% , respectively.

"Detecting the disease at an early stage is directly related to saving the patient's life," said AI Medical Service CEO Tomohiro Tada, an endoscopist who founded the startup.

Cancer screening using endoscopes has been based on visual observation by humans, meaning subtle abnormalities might be overlooked, (ア) the doctor's experience being an important factor.

"We hope to contribute to a reduction in such oversights and to make the quality of medical care more equal" through the use of AI, Tada said.

On Monday, AI Medical Service launched its first AI software product, which is designed to improve the early detection of stomach cancer. During an endoscopy, the AI system provides real-time analysis of the imaging data captured by the camera. The system, which has received regulatory approval from the health ministry, can be integrated with existing endoscopes made by Olympus and Fujifilm, both of which make up a dominant share of the endoscope market globally.

AI offers an extra pair of eyes with a recognition level as good as experienced endoscopists, helping doctors conduct more thorough exams, AI Medical Service said. That will then help reduce the number of overlooked cases.

"(A)our AI system has been trained with an amount of data that a human doctor would not be able to learn in a lifetime.... Working with such an AI system will make it possible to provide better medical care," Tada said.

The startup said the AI system is more of an "assistant" for doctors, meaning it's (B) _____, adding that this would nonetheless help alleviate the mental and physical burden on doctors.

The startup will keep upgrading the AI to improve its diagnostic accuracy and will continue

its research and development to make the system (イ) of detecting other gastrointestinal cancers. To provide diagnostic support to prevent other types of gastrointestinal cancer, the firm has also agreed to team up with Lpixel, a startup that provides image analysis technology for *colonoscopies, to help detect *colon polyps that might develop into cancer. AI Medical Service will market that system on behalf of Lpixel.

Tada, who founded his startup in 2017, was (c)inspired to develop the AI diagnosis system after attending a lecture by Yutaka Matsuo, a professor at the University of Tokyo and renowned AI expert in Japan. There, Tada learned that AI's image recognition skills were becoming superior to that of humans. Tada believes that Japan can lead the field of AI-based endoscopy because the country is a pioneer of the medical procedure.

Olympus dominates the gastrointestinal endoscope market globally with about a 70% share, while Fujifilm is well-known as an endoscope-maker. According to data compiled by Olympus last year, the number of endoscopists per 100,000 people in Japan stood at 28.2, considerably higher than other countries such as China, the United States and India, which had 2.8, 4.7 and 0.7, respectively.

"The quality and quantity of data is the most crucial thing for AI, said Tada, adding that AI Medical Service has partnered with more than 100 medical institutions in Japan to secure endoscopy imaging data.

AI Medical Service has been selected for the economy ministry's J-Startup program, which is designed to support startups that can be globally competitive. The startup has already established bases in the U.S. and Singapore. Last month, AI Medical Service announced that the regulatory review and registration for its AI diagnostic system in Singapore has been completed.

"We will expand our business not only in Japan but also in Southeast Asia using our Singapore base. We are also looking to enter Brazil, the U.S. and other parts of the world," Tada said.

"We are certain that expanding our products globally will help patients around the world."

(Kazuaki Nagata, "Tokyo startup uses AI to boost cancer detection," *The Japan Times*, March 8, 2024 より抜粋、一部改変)

注

*under the guise of ～を装って **endoscopic 内視鏡の

*gastrointestinal 胃腸の *colonoscopy 結腸鏡検査(法)

*colon polyp 結腸ポリープ

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問1 下線部(a)の convinced とほぼ同じ意味の表現を選び、番号で答えなさい。

- 1 confident 2 doubtful 3 pleased 4 hesitant

問2 下線部(b)の account for とほぼ同じ意味の表現を選び、番号で答えなさい。

- 1 construct 2 explain 3 explore 4 constitute

問3 空所(ア)を埋めるのに最も適切なものを選び、番号で答えなさい。

- 1 of 2 despite 3 with 4 on

問4 空所(イ)を埋めるのに最も適切なものを選び、番号で答えなさい。

- 1 enable 2 capable 3 possible 4 likable

問5 下線部(c)の inspired とほぼ同じ意味の表現を選び、番号で答えなさい。

- 1 forced 2 discouraged 3 allowed 4 stimulated

問6 下線部(A)を日本語に直しなさい。

問7 下に与えられた語(句)を正しい順に並べ替え、下線部(B)を埋めるのに最も適切な表現を完成させなさい。解答用紙には3番目と5番目に来る語(句)の番号を書きなさい。

- 1 the AI 2 the diagnosis 3 not 4 makes 5 that 6 decision
7 on 8 the final

問8 本文の内容を示すものとして、適切なものを1~7の中から3つ選び、番号で答えなさい。

- 1 Compared with patients with Stage 3 cancer, the five-year survival rates for those with Stage 1 are more than double.
- 2 AI Medical Service's software product detected stomach cancer for the first time in the world.
- 3 The analysis of the imaging data by AI will speed up medical operations in a large number of cases.
- 4 The founder of the startup project learned that AI was surpassing humans in image recognition skills.
- 5 The total number of doctors of internal medicine in Japan is much larger than that of the United States.
- 6 AI Medical Service plans to develop its business both locally and globally.
- 7 Many doctors believe that using AI will solve all kinds of challenging problems in medicine.

III 次の英文を読んで、問に答えなさい。

Using a revolutionary technology known as LiDAR (short for "Light Detection And Ranging"), scholars digitally removed the tree tops from aerial images of the now-unpopulated landscape, revealing the ruins of a vast *pre-Columbian civilization that was far more complex and interconnected than most *Maya specialists had supposed. "The LiDAR images make it clear that this entire region was a settlement system whose scale and population density had been greatly (a)underestimated," said Thomas Garrison, an Ithaca College archaeologist. The project mapped more than 2,100 square kilometers of the *Maya Biosphere Reserve in Central America, producing the largest LiDAR data set ever obtained for archaeological research. (A)The results suggest that Central America supported an advanced, ancient civilization that was, at its peak some 1,200 years ago, more comparable to sophisticated cultures such as ancient Greece or China than to the scattered and thinly populated city states that ground-based research had long suggested.

In addition to hundreds of previously unknown structures, the LiDAR images show raised highways connecting urban centers and *quarries. Complex *irrigation and *terracing systems supported intensive agriculture capable of (b)feeding masses of workers who dramatically reshaped the landscape. The ancient Maya never used the wheel or beasts of burden, yet "this was a civilization that was literally moving mountains," said Marcello Canute, a Tulane University archaeologist. "We've had this western arrogance that complex civilizations can't flourish in the tropics, that the tropics are where civilizations go to die," said Canute. "But with the new LiDAR-based evidence from Central America and Cambodia's Angkor Wat, we now have to consider that complex societies may have formed in the tropics and made their way outward from there."

"LiDAR is revolutionizing archaeology" said Francisco Estrada-Belli, a Tulane University archaeologist. "We'll need 100 years to go through all the data and really understand what we're seeing." Already, though, the survey has (c)yielded surprising insights into settlement patterns, city-to-city connectivity, and militarization in the *Maya Lowlands. At its peak in the Maya classic period (approximately 250-900), the civilization covered an area about twice the size of medieval England, but it was far more densely populated. "Most people had been (d)comfortable with population estimates of around five million," said Estrada-Belli. "With this new data it is no longer (ア) to think that there were 10 million to 15 million people there — including many living in low-lying, *swampy areas that many of us had thought (イ)."

Virtually all the Mayan cities were connected by raised highways wide enough to suggest that they were heavily trafficked and used for trade and other forms of regional interaction. These

highways were elevated to allow easy passage even during rainy seasons. In a part of the world where there is usually too much or too little rainfall, the flow of water was thoroughly planned and controlled via canals, ditches, and *reservoirs. Among the most surprising findings was the widespread presence of defensive walls, terraces, and *fortresses. "Warfare wasn't only happening toward the end of the civilization," Garrison said. "It was large-scale and systematic, and it endured over many years." The survey also revealed thousands of deep holes dug by modern-day *looters. "Many of these new sites are only new to us; they are not new to looters," said Marianne Hernandez, president of the *PACUNAM Foundation. *Environmental degradation is another concern. Guatemala is losing more than 10 percent of its forests annually, and habitat loss has increased along its border with Mexico as *trespassers burn and clear land for agriculture and human settlement. "By identifying these sites and helping to understand who these ancient people were, we hope to raise awareness of the value of protecting these places," Hernandez said.

The survey is the first phase of the PACUNAM LiDAR Initiative, a three-year project that will eventually map more than 14,000 square kilometers of Guatemala's lowlands, part of a pre-Columbian settlement system that extended north to the Gulf of Mexico. "The ambition and the impact of this project is just incredible," said one expert. "After decades of combing through the forests, no archaeologists had stumbled across these sites. (B)More importantly, we never had the big picture that this data set gives us. It really pulls back the veil and helps us see the civilization as the ancient Maya saw it."

(Tom Clynes, "Exclusive: Laser Scans Reveal Maya 'Megalopolis' Below Guatemalan Jungle," *National Geographic*, 2 February 2018 より抜粋、一部改変)

注

*pre-Columbian コロンブス以前の *Maya マヤの

*Maya Biosphere Reserve マヤ生物圏保護区 *quarry 採石場

*Irrigation 灌漑 *terracing 棚田 *Maya Lowlands マヤ低地

*swampy 沼地の *reservoir ため池 *fortress 要塞 *looter 略奪者

*PACUNAM Foundation パクナム財団 *environmental degradation 環境退廃

*trespasser 侵入者

問 1 本文の内容に照らして、下線部(a)～(d)の意味に最も近い表現を選び、番号で答えなさい。

- | | | | | |
|----|---|--------------|---|------------------|
| a. | 1 | undertaken | 2 | underlined |
| | 3 | undervalued | 4 | underdeveloped |
| b. | 1 | sustaining | 2 | refining |
| | 3 | depriving | 4 | describing |
| c. | 1 | hidden | 2 | utilized |
| | 3 | consumed | 4 | afforded |
| d. | 1 | accepting of | 2 | sympathized with |
| | 3 | grateful for | 4 | adverse to |

問 2 下線部(A)の内容を表わすものとして最も適切なものを選び、番号で答えなさい。

- 1 It is suggested that the Central American culture was akin to that of sophisticated yet thinly populated city states such as ancient Greece and China.
- 2 The findings suggest that Central America bore some resemblance to sophisticated cultures such as ancient Greece and China which peaked exactly 1,200 years ago.
- 3 The results once again suggest that Central America had a sophisticated culture similar to that of ancient Greece and China, as has long been suggested by ground-based research.
- 4 The findings indicate that a society in Central America was not thinly populated and that its culture may have been as sophisticated as those of ancient Greece and China.

問 3 本文の内容に照らして、(ア)と(イ)に入る語の組み合わせで最も適切なものを選び、番号で答えなさい。

- | | | | | |
|---|-----|----------------|-----|----------------|
| 1 | (ア) | unreasonable | (イ) | uninhabitable |
| 2 | (ア) | uninhabitable | (イ) | unreasonable |
| 3 | (ア) | unremarkable | (イ) | undiscoverable |
| 4 | (ア) | undiscoverable | (イ) | unremarkable |

問 4 下線部(B)の内容を表わすものとして最も適切なものを選び、番号で答えなさい。

- 1 It is important to note that we never really understood the existence of these aerial images.
- 2 It is regrettable that we did not have this large visual technology, and we were therefore not able to grasp the importance of this site.
- 3 The findings were an important step to get an overall understanding of this site.
- 4 The data set made us realize the importance of the large-sized images that the LiDAR can provide.

問 5 本文の内容を示すものとして、適切なものを1～6の中から3つ選び、番号で答えなさい。

- 1 Westerners arrogantly believed that people in the tropics tended to die prematurely from the heat.
- 2 At the height of the Mayan civilization, both the area and population were found to be about twice that of modern England.
- 3 It was suggested that many conflicts may have occurred throughout the Mayan civilization.
- 4 This research indicates that the Mayan civilization was aware of weather patterns when developing the land.
- 5 In some areas, there have been problems with intruders trying to use open spaces for their own research.
- 6 For a long time, archaeologists have carried out ground-based investigations, but without modern technology they would not have been able to make revolutionary discoveries.

IV 【A】、【B】それぞれについて、空所(a)~(e)に入れるのに最も適切な文を選択肢1~5より選び、番号で答えなさい。

【A】

Hiroko: Hi, Anne. Welcome back.

Anne: Oh, hi, Hiroko. Good to see you again. How are you?

Hiroko: Fine, thank you. How was your trip to London? (a)

Anne: I sure did. I wish I could have stayed longer. (b)

Hiroko: That's great to hear. So, tell me more about your trip.

Anne: I really enjoyed the scenery, the food, the shopping— everything about it.

I also had a chance to visit the British Museum and the British Library and learned a lot about history, art, and culture in the UK.

Hiroko: (c) So the trip must have really fit in well with your goals.

Anne: Yes, I got some really good ideas. Next time, if possible, I'd like to visit the northern part of England. (d) Say, Hiroko, why don't you go with me?

Hiroko: I would love to, Anne. But I'll have to find another part-time job and save up some money for travel expenses.

Anne: Me, too. (e) So I can't afford to go again very soon, that's for sure.

選択肢

- 1 I hear the scenery there is magnificent.
- 2 Everything was fantastic.
- 3 I spent quite a lot this time.
- 4 I bet you had a good time, didn't you?
- 5 You're a history and literature major, right?

【B】

Kate: It's already half past seven. I'm hungry and tired.

Will: Me, too, Kate. (a) My guidebook says there's a nice Japanese restaurant where we can have fresh fish not too far from here.

Kate: We ate fish yesterday. (b) Let's try something different.

Will: No problem. How about Korean cuisine? The guidebook says there's a Korean restaurant whose specialty is bibimbap. Vegetables and beef on rice, you know. You can also enjoy various types of soups there. (c)

Kate: Sure. Bibimbap sounds fine. Nice and healthy. (d) I heard it's really good.

Will: Hey look! There's an Italian restaurant right across the street. How about that? We won't have to walk very far.

Kate: Italian is fine, too. In fact, fresh pasta is my favorite. Good idea.

Will: And I'm dying for grilled beef. Italian cheese should be fine with it. We'll have lots of choices for desserts. (e)

選択肢

- 1 We'd have to take a taxi, though.
- 2 I hope it's not too crowded!
- 3 Let's find a good place to eat and drink.
- 4 I also want to try spicy chicken soup.
- 5 I'm not in the mood for seafood tonight.

V 次の(1)~(10) の()に入る最も適切な語(句)を選び、番号で答えなさい。

(1) I heard somebody () my sister about the accident, and I noticed that the news upset her.

1 blaming 2 shouting 3 crying 4 telling

(2) We () the earthquake that happened last night.

1 ran with 2 walked about 3 escaped to 4 sheltered from

(3) My brother and I are so () that we often know what each other is thinking.

1 like 2 alike 3 likely 4 likewise

(4) Your children should be more () toward their teachers.

1 respectable 2 respected 3 respectful 4 respective

(5) According to the newspaper, a 70-year-old female climber was rescued () after spending ten days beneath the rocks.

1 lives 2 alive 3 lively 4 living

(6) The train arrived at the station so late that I () missed the bus to the university.

1 soon 2 most 3 almost 4 hardly

(7) The letter from my mother was short because there wasn't () from home.

1 some news 2 much news 3 a little news 4 many news

(8) When I came back from Europe, I had such a lot of luggage () I had to pay extra at the airport.

1 who 2 that 3 what 4 which

(9) These elementary schools () teachers who can conduct English classes in English.

1 are in urgent need of 2 are wanted to hire

3 are required seriously 4 want recruiting

(10) Jane shows no interest in international problems at all. I don't know how she can be so () to suffering in other countries.

1 indifferent 2 sensitive 3 sympathetic 4 inheritable