

2024年度入学試験問題

英 語

注 意

- 1 問題冊子は1冊（11ページ）、解答用紙は4枚です。
- 2 試験中に問題冊子の印刷不鮮明、ページの落丁・乱丁及び解答用紙の汚れ等により解答できない場合は、手を高く挙げて監督者に知らせなさい。
- 3 すべての解答用紙に、それぞれ2箇所受験番号を記入しなさい。
- 4 解答は、すべて解答用紙の指定されたところに書きなさい。
- 5 試験終了後、問題冊子は必ず持ち帰りなさい。

問 1 次の英文を読んで、下の設問に答えなさい。

Rice is in trouble as the Earth heats up, threatening the food and livelihood of billions of people. Sometimes there's not enough rain when seeds need water, or too much when the plants need to keep their heads above water. As the sea intrudes, salt ruins the crop. As nights warm, there are fewer harvests.

These problems are forcing the world to find new ways to grow one of its most important crops. Rice farmers are shifting their planting calendars. Plant breeders are working on seeds that can endure high temperatures or salty soils. Stronger varieties of rice from many years ago are coming back.

And where water is running low, as it is in so many parts of the world, farmers are letting their fields dry out on purpose, a strategy that also reduces methane, which is a very strong greenhouse gas that rises from rice fields.

The challenges now are different from those 50 years ago. Then, the world needed to produce much more rice to avoid famine. Seeds that could produce more crops, which were grown with chemical fertilizers, helped. For example, along the Mekong Delta in Vietnam, farmers went on to produce as many as three harvests a year, feeding millions at home and abroad.

Today, that very system of intensive production has created new problems worldwide. It has lowered water levels, driven up fertilizer use, reduced the diversity of rice breeds that are planted, and polluted the air with the smoke of burning rice plants. On top of that, there's climate change: It has altered the rhythm of sunshine and rain that rice depends on.

Rice faces another climate problem. It accounts for an estimated 8 percent of all global methane emissions from human activity. Although it's only a fraction of the emissions from coal, oil and gas, rice cannot be replaced by other sources. It is the staple grain for an estimated three billion people around the world.

In 1975, facing famine after war, Vietnam resolved to grow more rice. It succeeded spectacularly, eventually becoming the world's third-largest rice exporter after India and Thailand. The green patchwork of the Mekong Delta became its most prized rice region. At the same time, though, ①the Mekong River was reshaped by human hands.

Starting in southeastern China, the river runs through Myanmar, Laos, Thailand and Cambodia, interrupted by many dams. Today, by the time it reaches Vietnam, there is little freshwater left to flush out seawater moving inland. Rising sea levels bring in more salty seawater. The problem is only going to get worse as temperatures rise.

Climate change brings other risks. You can no longer count on the monsoon season to start in May, as before. And so in dry years, farmers in Vietnam now rush to sow rice 10 to 30 days earlier than usual. In coastal areas, many rotate between rice and shrimp, which like a bit of saltwater.

But this requires controlling greed, said Dang Thanh Sang, 60, a lifelong rice farmer in Soc Trang. Shrimp bring in high profits, but also high risks. Disease spreads easily. The land becomes barren. He has seen it happen to other farmers.

So, on his seven acres, Mr. Dang plants rice when there's freshwater in the canals, and shrimp when seawater flows in. Rice cleans the water. Shrimp nourish the soil. "It's not a lot of money like growing only shrimp," he said. "But it's safer."

Dr. Argelia Lorence, a plant biochemist at Arkansas State University, has a laboratory filled with 310 different kinds of rice seeds. Many are very old and rarely grown now. But they hold genetic superpowers that Dr. Lorence is trying to find, particularly those that enable rice plants to survive hot nights, one of the biggest dangers of climate change. She has found two such genes so far. They can be used to breed new hybrid varieties.

“I am convinced,” she said, “that decades from now, farmers are going to need very different kinds of seeds.” Dr. Lorence is among an army of rice breeders developing new varieties for a hotter planet. There are now many seed companies that are heavily invested in this kind of technology.

This new type of rice research involves Crispr, a gene-editing technology that U.S. scientists are using to create a seed that produces virtually no methane. (It is important to note, though, that genetically modified rice remains controversial, and only a handful of countries allow its cultivation.)

In Bangladesh, researchers have produced new varieties of rice that can grow in unusual situations. Some rice can grow even when the plants are under water for a few days; some can grow in soils that have turned salty. In the future, researchers say, the country will need new rice varieties that can grow with less fertilizer, which is now financially supported by the government. In any case, Bangladesh will need to produce more rice as it is eaten at every meal.

In the United States, as well, rice is central to the story of farming. It enriched the coastal states of the American South, all with the labor of enslaved Africans who brought with them generations of rice-growing knowledge. Today, the country’s dominant rice-growing area is spread across the hard clay soil near where the Mississippi River meets the Arkansas River. It looks nothing like the Mekong Delta. The fields here are as flat as pancakes. Work is done by machine. Farms are vast, sometimes more than 20,000 acres.

What they share are the dangers of climate change. Nights are hotter. Rains are not consistent. And there’s the problem created by the very success of so much intensive rice farming: Underground water is running dangerously low.

Benjamin Runkle is an engineering professor from the University of Arkansas at Fayetteville. He suggested that instead of keeping rice fields flooded at all times, as growers have always done, Arkansas farmers should let the fields dry out a bit, then let in the water again, then repeat.

On the edge of one of these fields, Dr. Runkle erected a tall white device that looks like a giant bird. It measured the gases produced by bacteria stewing in the flooded fields. His experiment, carried out over seven years, concluded that by not flooding the fields continuously, farmers can reduce rice methane emissions by more than 60 percent.

Other farmers have taken to planting rice in rows, like corn, and leaving narrow paths in between for the water to flow. That, too, reduces water use and, according to research in China, where it’s been common for some time, cuts methane emissions. The most important finding is that it reduces the cost of energy to pump water.

There will be more positive notes to this story soon. For farmers who can demonstrate emissions reductions, the U.S. government is offering funds for what it calls “climate smart” projects. The government hopes that these incentives will persuade more growers to adopt alternate wetting and drying of their rice fields.

[Somini Sengupta & Tran Le Thuy, Rice gets reimagined, from the Mississippi to the Mekong. *The New York Times*, May 20, 2023 より抜粋、一部
改変]

1. Which of the following reasons is NOT mentioned in the passage about why rice production is in trouble today? Circle the best answer.
 - (A) Famine has reduced rice production.
 - (B) Farmers are using too much fertilizer.
 - (C) Rice fields produce a dangerous greenhouse gas.
 - (D) Sea water is moving into rice fields.

2. What are some rice farmers in Vietnam doing to adjust to the climate changes due to global warming? Circle the best answer.
 - (A) Developing new breeds of rice
 - (B) Harvesting rice fewer times a year
 - (C) Rotating rice crops with shrimp breeding
 - (D) Sowing rice 10 to 30 days later

3. According to the passage, which of the following statements is correct? Circle the best answer.
 - (A) Benjamin Runkle developed a device that can water rice fields.
 - (B) Dang Thanh Sang is originally a shrimp producer.
 - (C) India is likely the largest rice exporter in the world.
 - (D) The U.S. has asked farmers not to grow genetically modified rice.

4. メタンの排出に関して、コメが石炭や石油やガスと異なる二つの点は何か、日本語で説明しなさい。

5. 下線部①が示す具体的な内容を日本語で説明しなさい。

問 2 次の英文を読んで、下の設問に答えなさい。

In the winter of 1959, after leading the Montgomery bus boycott that arose from the arrest of Rosa Parks and before the trials and triumphs to come, Martin Luther King, Jr., and his wife, Coretta, landed in India, in the city then known as Bombay, to visit the land of Mohandas Gandhi, the father of nonviolent protest. They were greeted with flowers upon arrival, and King told reporters, "To other countries, I may go as a tourist, but to India I come as a pilgrim."

He had long dreamed of going to India, and they stayed an entire month, at the invitation of Prime Minister Jawaharlal Nehru. King wanted to see for himself the place whose fight for freedom from British rule had inspired his fight for justice in America. He wanted to see the so-called Untouchables, the lowest caste in the ancient Indian caste system, whom he had read of and had sympathy for, but who had still been left behind after India gained its independence the decade before.

He discovered that people in India had been following the trials of his own oppressed people in America, knew of the bus boycott that he had led. Wherever he went, the people on the streets of Bombay and Delhi crowded around him for an autograph.

One afternoon, King and his wife journeyed to the southern tip of the country, to the city of Trivandrum in the state of Kerala, and visited with high school students whose families had been Untouchables. The principal made the introduction.

"Young people," he said, "I would like to present to you a fellow untouchable from the United States of America."

King was astonished. He had not expected that term to be applied to him. He was, in fact, upset by it at first. He had flown in from another continent, had dined with the prime minister. He did not see the connection, did not see

what the Indian caste system had to do directly with him, did not immediately see why the lowest-caste people in India would view him, an American Negro and a distinguished visitor, as low-caste like themselves, see him as one of them. "For a moment," he wrote, "I was a bit shocked and irritated that I would be referred to as an untouchable."

Then he began to think about the reality of the lives of the people he was fighting for—20 million people who were assigned to the lowest rank in America for centuries, "still suffering in a cage of poverty," isolated in the poorest neighborhoods, exiled in their own country.

And he said to himself, "Yes, I am an untouchable, and every Negro in the United States of America is an untouchable."

In that moment, he realized that the Land of the Free had imposed a caste system not unlike the caste system of India and that he had lived under that system all of his life. It was what lay beneath the forces he was fighting in America.

①What Martin Luther King, Jr., recognized about his country that day had begun long before the ancestors of our ancestors had taken their first breaths. More than a century and a half before the American Revolution, a social class structure had evolved on the contested soil of what would become the United States, a concept of privilege, the temptation of entitled expansion that would set in motion the world's first democracy and, with it, a ranking of human value and usage.

It would twist the minds of conquering men, as greed and pride took over human conscience. They would take land and human bodies that they believed they had a right to. If they were to convert this wilderness and civilize it to their liking, they decided they would need to conquer, enslave, or remove the people already on it. The conquerors would transport those they considered lesser beings to tame and work the land to extract the wealth that lay in the rich soil and shorelines.

There developed a caste system, based upon what people looked like, an internalized ranking, unspoken, unnamed, unacknowledged by everyday citizens even as they go about their lives believing in it and acting upon it unconsciously to this day. Just as the internal structure of a building is not visible to those who live in it, so it is with caste. ②Its very invisibility is what gives it power and endurance. And though it may move in and out of consciousness, though it may come up again in times of dramatic change and recede in times of relative calm, it is ever-present throughout the country's operation.

The scholar Ashley Montagu was among the first to argue that race is a human invention, a social concept, not a biological one, and that in seeking to understand the divisions and inequalities in the United States, we typically get trapped in the complexities and myths of race. "When we speak of the race problem in America," he wrote in 1942, "what we really mean is the caste system and the problems which that caste system creates in America."

[Isabel Wilkerson, *Caste: The origins of our discontents*. Penguin Random House, 2020 より抜粋, 一部改変]

1. According to the passage, when did the country of India become free from British rule? Circle the best answer.
 - (A) After King visited India
 - (B) Around 1949
 - (C) In the winter of 1959
 - (D) When King fought for justice
2. According to the passage, what shocked Martin Luther King, Jr., when he visited the school in India? Circle the best answer.
 - (A) Being called an untouchable
 - (B) Being recognized by so many people
 - (C) Seeing the prime minister of India
 - (D) Seeing the widespread poverty
3. According to the passage, which of the following ideas is NOT mentioned as part of the caste system in the U.S.? Circle the best answer.
 - (A) Caste is always present beneath the surface of American society.
 - (B) Differential treatment in society cannot be easily seen.
 - (C) One group of people can be naturally superior to another.
 - (D) Race and caste have nothing to do with each other.

4. 下線部①が示す内容について、日本語で説明しなさい。
5. 下線部②が示す内容について、日本語で説明しなさい。

問 3 次の文章を読んで、下線部①、②、③を英語にしなさい。

テレビCMで化粧品のキャンペーンソングが流れれば、春の到来である。そう言える時代がかつてあった。1982年。資生堂が曲づくりを任せしたのは、坂本龍一さんと忌野清志郎さんという異色の組み合わせだった。坂本さんのキーボードに忌野さんが鼻歌であわせる。

出来上がったのが「い・け・な・いルージュマジック」。資生堂から示されていた「すてきな」は「いけない」に変わっていた。二人は笑いながら、絶対にこれでいくと言う。プロデューサーは頭を抱えた。それが、発売されると40万枚のヒットに。ど派手な二人の化粧姿に目をむいたのを思い出す。

独創的な音楽とは坂本さんにとって何だったか。思いついたことを思うがまま白い紙に塗りたいことでは、と後年インタビューで問われ、答えている。「それはだめだな」。

自分で発明したつもりでも、何かと似ていることはしょっちゅうあるという。「①過去の真似(まね)をしないため、自分の独自なものをつくりたいから勉強するんですよ」。(川村元気著『仕事。』)

真似ないために過去を学ぶ。凡人の及びもつかぬ努力を重ねたのだろう。②ヒット曲から映画音楽まで、作品をふり返ると、その世界の大きさに驚かずにいられない。

坂本さんが71歳で亡くなった。「芸術は長く、人生は短し」という言葉が好きだったという。③優れた音楽は、作者の死後も長く残る。ただ「人生は短し」の響きが、いまはこだましている。あのピアノの調べを聞くことはもう出来ない。

[「(天声人語) 坂本龍一さん逝く」『朝日新聞DIGITAL』2023年4月4日より抜粋、一部改変]

問 4 次の英文を読んで、指示に従って英語で答えなさい。

Suppose a TV reporter asked you about your favorite teacher (at school, cram school, dance lessons, etc.). How would you describe the teacher? For example, how did they treat the students, or what activities did you enjoy? Write your response to the reporter in about 10 lines in English, giving reasons why your favorite teacher was so important to you.