

受験番号				
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英 語

合図があるまでは絶対に中を開けないこと

英語の試験は初めにリスニング、次にリーディングの順序で行います。リーディングの指示は、リスニングが終わった後で行います。

リスニングの指示

1. リスニングには、PART I, II, III の3つがあります。
 2. 各PARTが始まる前に、日本語で説明をします。注意して聞いて下さい。
 3. 問題冊子には、問いと、4つの選択肢が与えられています。その中から最も適当と思われる答えを1つ選んで、解答カードの相当欄をマークして下さい。
 4. 各PARTが終わったら、音声による指示があるまで、次のページを開けないで待っていて下さい。
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5. PART I では 10 の短い会話を聞きます。それぞれの会話についての問いに答えて下さい。
 6. PART II ではPART I より長い会話を 2 つ聞きます。それぞれの会話についての問いに答えて下さい。
 7. PART III では講義を 3 つ聞きます。講義の内容について、それぞれ 5 つの問いに答えて下さい。

「受験番号」を解答カードの定められたところに忘れずに書き入れること

(余 白)

次のページからの問題には、それぞれ a, b, c, d の選択肢が与えられています。
各問題につき、a, b, c, d の中から、最も適切と思われる答えを1つだけ選び、
解答カードの相当欄をマークして、あなたの答えを示して下さい。

例 $\left(\begin{array}{c} \text{E} \\ \text{F} \end{array} \right)$

$\left(\begin{array}{c} \text{A} \\ \text{B} \end{array} \right)$ $\left(\begin{array}{c} \text{C} \\ \text{D} \end{array} \right)$ $\left(\begin{array}{c} \text{E} \\ \text{F} \end{array} \right)$

PART I

Choose the best answer to each question.

Questions 1-10.

1. What will the man probably do next?
 - a. go home
 - b. go to class
 - c. email his teachers
 - d. visit the nurse

2. Where did the woman and man previously see each other?
 - a. in a lesson
 - b. in Pine Dorm
 - c. in the man's dorm
 - d. in a discussion group

3. What problem are the students having regarding the textbook?
 - a. They cannot access the online bookstore to buy it.
 - b. They cannot find a shop assistant to locate it.
 - c. They cannot find it in the bookstore.
 - d. Their professor has not told them where to find it.

4. What does the woman tell the man to do?
 - a. go to his next class
 - b. write to her
 - c. attend her office hours today
 - d. confirm his plan for the experiment

5. 削除

6. Which of the following are both students worried about?
 - a. having a stable internet connection at home
 - b. making friends at university
 - c. studying at home when parents are working from home
 - d. using technology

7. What will the woman most likely do next?
- a. work out in the gym
 - b. take a photo to the bookstore
 - c. get her photo taken
 - d. submit the form for a membership card
8. What does the man say about Professor Matsui's assignment?
- a. The due date has been postponed.
 - b. It will significantly affect the man's grade.
 - c. It is similar to the assignment for Anthropology 101.
 - d. It is not his priority.
9. According to the conversation, which of the following is true?
- a. Students can refer to their notes during the test.
 - b. Students may see the questions before the test.
 - c. Students will take the test on Wednesday afternoon.
 - d. Students need to study Chapter 4 for the midterm test.
10. Where does this conversation probably take place?
- a. the career guidance center
 - b. the counseling center
 - c. the library reference center
 - d. the learning support center

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PART II

Choose the best answer to each question.

Questions 11-12.

11. What problem is the man having?
- a. He is too busy to talk to the advisor.
 - b. He wants to change his major.
 - c. He cannot decide which course to take.
 - d. He does not want to take science classes.
12. What is the man most unlikely to do?
- a. register for the biology course
 - b. register for the chemistry course
 - c. ask the chemistry professor for help
 - d. ask the biology professor for help

Questions 13-15.

13. Why has the man not applied for student accommodation so far?
- a. The man does not have enough money for rent.
 - b. The man wants to live off campus.
 - c. Accommodation on campus is not available.
 - d. Accommodation close to campus is all taken.
14. Why is the man struggling to find a part-time job?
- a. No part-time jobs are available on campus.
 - b. Many other students are also looking for part-time work.
 - c. The man wants to study to improve his grades.
 - d. The man does not live on campus.
15. Why do the students have to maintain their GPA to work on campus?
- a. The work often requires academic skills.
 - b. The students need to be flexible with their course load.
 - c. The university wants students to focus on their studies.
 - d. The university wants the best students to work on campus.

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PART III

Choose the best answer to each question.

Questions 16-20.

Listen to the lecture.

16. Why does the lecturer refer to ‘statues, portraits, and possessions of authority figures’?
- to give examples of objects representing comprehensive national histories
 - to give examples of objects typically found in national museums
 - to give examples of objects that challenge rich and powerful people
 - to give examples of objects that should be removed from national museums
17. According to the lecture, which of the following statements is true of the suffragettes?
- They were British.
 - They were criminals.
 - They fought to avoid suffering.
 - They supported women’s rights.
18. Which of the following is NOT mentioned as a reason why damaging money is an effective means of protest?
- It is effective at widely spreading a message.
 - Figures of authority are often depicted on money.
 - Money that has been damaged can be sold as accessories.
 - It can be difficult to trace the people who damaged the money.
19. According to the lecture, how did umbrellas first become adopted by the Umbrella Movement in Hong Kong?
- The umbrellas were used to protect protesters from the police.
 - The umbrella had been used as an anti-authoritarian symbol in the past.
 - Protesters did not believe that they could be arrested for carrying an umbrella.
 - The umbrellas were used to prevent protesters from being identified by authorities.
20. What is the main purpose of the lecture?
- to question the power of rich people
 - to decolonise the exhibits in museums
 - to offer support for oppressed groups
 - to highlight creative forms of protest

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Questions 21-25.

Listen to the lecture.

21. 删除

22. What does 'robustness' refer to in this lecture?

- a. the strength of the robot's decision-making
- b. the length of the robot's decision-making time
- c. the possibility of successful task completion
- d. the frequency of successful task completion

23. According to the lecture, why might some people become less fearful about robots dominating humans?

- a. Thinking aloud makes it easy for humans to see robots' motivation.
- b. Robots with think-aloud technology do not refuse to accomplish tasks.
- c. Robots prioritise human satisfaction whenever they are able.
- d. Robots refuse to carry out tasks when the instruction goes against social etiquette.

24. 删除

25. According to the lecture, what is the main reason why this kind of research is important?

- a. Robots need to work more efficiently.
- b. People are becoming more dependent on AI.
- c. Many countries have increasingly elderly populations.
- d. Robots and humans need to speak the same language.

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Questions 26-30.

Listen to the lecture.

26. According to the lecture, what is gluten?
- a. a group of proteins that are found in most grains, such as wheat, barley, rice, and quinoa
 - b. a group of proteins that exist in natural foods, such as meat, vegetables, and legumes
 - c. a group of proteins that are rarely used in packaged foods as preservatives or additives
 - d. a group of proteins that have the potential to disrupt the normal digestive process
27. Which is true about celiac disease based on the information presented in the lecture?
- a. Symptoms are limited to digestive issues.
 - b. Celiac disease can lead to nutrient deficiency.
 - c. There are many ways to treat celiac disease.
 - d. Celiac disease is not genetically inherited.
28. What can be said about the gluten-free diet for the general population?
- a. It may not have any specific advantages.
 - b. It helps with weight loss and energy gain.
 - c. It may lead to excess iron, zinc, and potassium in the diet.
 - d. It is recommended by health professionals.
29. According to the lecture, which of the following is a probable value of the gluten-free market in 2022?
- a. 20.61 billion U.S. dollars
 - b. 21.16 billion U.S. dollars
 - c. 21.61 billion U.S. dollars
 - d. 22.16 billion U.S. dollars
30. In the conclusion, which of the following is the lecturer's final recommendation?
- a. Most people should simply follow the advice of celebrities regarding dietary balance.
 - b. Only people with specific medical conditions should follow the gluten-free diet.
 - c. People should learn more about the gluten-free diet before choosing to adopt it.
 - d. People should be suspicious of companies producing gluten-free products.

リーディングの指示

1. リーディングには、PART I と PART II の2つがあります。
2. 解答時間は、PART I、PART II を合わせて60分です。どちらのPART、どの問いから始めてもかまいません。
3. 各問いには4つの選択肢が与えられています。その中から最も適切と思われる答えを1つ選んで、解答カードの相当欄をマークして下さい。
4. 終了の指示があったら直ちに鉛筆を置いて、問題冊子と解答カードを試験監督が集め終わるまで待っていて下さい。

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5. PART I では、3つの文章をよく読んで、それぞれの文章についての8つの問いに答えて下さい。文章はくりかえし読んでもかまいません。
 6. PART II では、文章中の12の空欄を埋めて、意味が通るように文章を完成させて下さい。PART II の解答指示は24ページにありますので、それに従って下さい。
 7. 解答開始の指示の後には、どのページを開いてもかまいません。

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PART I

Text 1

1. For hundreds of years, work has been essential for humans to earn money and to support themselves and their families. What we do is intrinsically connected with who we are, and having a “good job” is often synonymous with being successful in life. Even high school students tend to make decisions about their university major with one eye on their post-university employability. However, this could all be about to change. Although the timeline is uncertain, it is generally agreed that machine learning and robotics will eventually lead to the disappearance of almost all jobs for humans. This mass automation of labor will have major implications, both for individuals and for society.
2. It may be easy to imagine that this shift will happen in the distant future, but the truth is that the modern era of automation has already begun. This is most obvious in manual work such as cleaning, and in blue-collar roles in factories and construction. Machines can already complete many of these tasks with greater efficiency, greater consistency, and greater speed than humans. Given that approximately 65% of workers in Japan are employed in industries that are at immediate risk of automation, mass unemployment could be a major social issue sooner rather than later.
3. As technology develops, very few jobs will be safe from automation. For example, doctors are viewed as some of society’s most highly knowledgeable individuals. However, it can be difficult to ensure that individual doctors have equal and up-to-date knowledge. In contrast, computers can be integrated into a single information-sharing network and Artificial Intelligence (AI) can ensure that it is continuously updated with the latest information. An integrated medical network like this could greatly assist, and then eventually replace, human doctors in their treatment of their patients. This should lead to higher standards of healthcare around the world. It would mean diagnoses could be made more accurately, patients’ health could be observed more closely, and trends in health such as emerging epidemics could be identified and managed more swiftly.
4. The uncomfortable reality that human jobs may soon be obsolete leads to a number of issues, both practical and existential. Most pressing is the issue of money: if everyone is permanently out of work and has no obvious means of income, the survival of both the individual and of our current society could be at risk. One commonly suggested solution is Universal Basic Income (UBI), an idea advocated by business leaders including Elon Musk, Jeff Bezos, and Bill Gates. This involves all citizens receiving a monthly payment from the government to cover their basic needs. Critics suggest that UBI is too expensive for governments and that it can make individuals too reliant on their government. However, if managed carefully, experts have calculated that UBI can virtually eliminate poverty, reduce inequality, and actually boost a country’s economic growth. In addition, most small-scale experiments with UBI which have been conducted around the world suggest that receiving a basic income tends to boost happiness, health, and trust in social institutions, while also helping to reduce crime.

5. A more existential issue is that, without work, people may struggle to derive meaning from life. In modern society, a person's professional role often defines who they are and what their position within society is. If there were no jobs, it is possible that people could struggle to identify their purpose in life. A related issue is the abundance of leisure time in a workless world. Although many people suffer from stress, exhaustion, and an unhealthy work-life balance in modern work culture, it is conceivable that having unlimited free time would also be detrimental to people's well-being. This is because the human mind craves the challenge of engaging with tasks and working towards goals. The danger of too much unstructured free time could mean people feel aimless or unfulfilled in life, which would have serious implications for their mental health and general well-being.
 6. Despite these potential risks, it is highly unlikely that many people will struggle to find ways to fill their time. If their basic income is guaranteed, people will be more free to explore their hobbies, to develop new skills, and to learn for pleasure. It is possible that people could then use their interests and skills to earn extra money and to contribute to the community, for example by teaching others, selling their artwork, or putting on live performances, all without the stress of actually needing to work. More time could also be dedicated to raising children, supporting the elderly, and volunteering to improve the local area.
 7. Although many people may be anxious about the idea of a world without work, this vision of the future seems less stressful, more creative, and more personally fulfilling than modern life. To some, it may sound too idealistic. It is true that a post-work society will require dramatic shifts in all aspects of governance, in our lifestyles, and in our beliefs about what it means to be successful in life. However, if work is no longer necessary, then a world of opportunities opens up.
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31. What is the function of paragraph 1?
 - a. to indicate how critical it is that humans have a good job
 - b. to outline the potential impact of labor automation
 - c. to raise questions about the intrinsic value of machine learning
 - d. to address the imminent need for automation in the workplace
32. What do the underlined words "this shift" refer to in paragraph 2?
 - a. the change in the timeline of when jobs will become automated
 - b. the increase in the role of automation in supporting human workers
 - c. the impact on workers' employability in the mass automation sector
 - d. the disappearance of human jobs due to developments in automation
33. Which of the following best reflects the future healthcare described in paragraph 3?
 - a. AI will never be able to fully replace human doctors.
 - b. AI will help human doctors ensure that their knowledge is constantly up-to-date.
 - c. AI will enable more careful monitoring of individual and societal health.
 - d. AI will be able to cure serious illnesses more quickly.

34. Which of the following is NOT mentioned about Universal Basic Income (UBI) in paragraph 4?
- There are concerns that UBI places too much importance on the role of the government.
 - Evidence suggests that UBI can have a number of benefits for society.
 - An increasing number of experiments are taking place into the use of UBI.
 - The main purpose of UBI is to enable people to afford the essentials.
35. Which of the following is closest in meaning to the underlined word “detrimental” in paragraph 5?
- harmful
 - fatal
 - revolutionary
 - negligible
36. Which of the following can be inferred from paragraph 5?
- Work plays an important role in providing structure and focus to a person’s life.
 - Not working at all can be more damaging than working too much.
 - People tend to benefit from dealing with stress in their lives.
 - The biggest problem of modern society is the difficulty of balancing work and leisure.
37. Why does the author describe some ways people may spend their free time in paragraph 6?
- to begin concluding the passage
 - to restate the main idea about having a lot of free time
 - to counter the risks mentioned in the previous paragraph
 - to provide supporting evidence for ideas in the previous paragraph
38. Which of the following statements best reflects the author’s overall claim in paragraph 7?
- There will be many changes in future society because humans will no longer need to work.
 - There are many reasons why people are anxious about a world without human work.
 - Urgent action should be taken in order to prepare individuals and society for a world without human work.
 - A world without human work could have major benefits for people’s happiness and well-being.

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Text 2

1. Living in a democracy is a relatively recent trend. American people began to enjoy democratic freedoms with the 1788 ratification of the Constitution of the United States, but they represented less than one percent of the world population at that time. Despite spreading to many parts of the world since then, the concept of democracy differs from place to place. According to Matt Cole, a professor at the University of Edinburgh, democracy is “the badge worn by leading political parties of the Left in America, the Right in Japan, the extreme Right in Russia and the opposition in Zimbabwe.” Many countries and governments proudly declare themselves as democracies regardless of social and political practices. Thus, democracy as we know it today is a new concept from a historical perspective and one which is interpreted differently by different countries. Nevertheless, most political scientists agree on the specific characteristics of a democracy, such as institutionalized freedom, the protection of individual rights, and free and fair elections.
2. These characteristics have been employed by several institutions as criteria to evaluate the level of democracy experienced in a country. For example, the Democracy Index issued by an institution called the Economist Intelligence Unit categorizes 165 countries in the world in terms of five features: electoral process and pluralism, the functioning of government, political participation, political culture, and civil liberties. Based on the scores in these five factors, the countries are classified as “full democracy,” “flawed democracy,” “hybrid regime,” or “authoritarian regime.” The four categories are ranked from the most democratic countries to the least democratic ones, with “hybrid regime” referring to those countries with both democratic and authoritarian characteristics. As of 2020, only 23, or 13.8%, of the 165 countries ranked “full democracies” and they were home to only 8.4% of the world’s population. In addition to European countries, some Asian countries, such as Japan and South Korea, were included in this category. A further 52 countries, which comprised 41% of the world’s population, were categorized as “flawed democracies,” including France and the United States.
3. Another example of the evaluation of democracy is provided by a US-based NGO, Freedom House, which assesses how much individuals enjoy basic human rights and freedom in the world. In its 2021 issue of a report titled *Freedom in the World*, 39.5% of the 210 countries and territories in the world were described as “free”, while the other countries were “partly free” or “not free”. In all these classifications, many European countries, notably Nordic countries such as Norway and Denmark, were considered to have the highest levels of democracy.

4. Even though these institutions define democracy somewhat differently, they are unanimous in arguing that democracy has generally been deteriorating in recent years. Since Freedom House began issuing its annual report in 2005, the number of “free” countries dropped from 89 to 82, and the number of countries in the “not free” category rose from 45 to 54. Economic and physical insecurity, as well as an increase in violent conflict around the world, seems to have benefitted authoritarian regimes more than democracies. In 2020, the Democracy Index indicated that particularly due to the COVID-19 pandemic, the world experienced the most significant rollback of individual freedoms ever undertaken by governments during peacetime and perhaps even in wartime. One aspect of democracy severely influenced by the pandemic was elections. According to the International Institute for Democracy and Electoral Assistance, elections were postponed or canceled in at least 78 countries and territories in 2020. Even when elections were held, COVID-19 often meant that limitations were imposed that may have affected their legitimacy. For example, in 2020, when Burundi held its first competitive presidential elections since 1993, international election observers were unable to attend due to coronavirus quarantine rules.
5. Despite the decline in democracy overall, some countries made advances in their democratic practices in 2020. A number of successful elections were held in all regions and in countries of all income levels. Improvements in electoral processes were shown in Montenegro and Bolivia, as well as in the United States, where the presidential election had the largest turnout rate in 120 years. To put it another way, democracy exhibited its adaptability in the face of the specific limits imposed by a world infected with COVID-19. While there is an argument that authoritarian regimes are more effective than democracies at dealing with the pandemic, the evidence does not seem to support this claim. Many, if not all, democracies, such as South Korea and New Zealand, have developed effective responses to the spread of the disease.
6. Although there are varying interpretations of democracy, its core values seem to appeal to a sense of justice and reflect basic human rights. The debate about the efficiency of this governmental system is likely to go on for years to come; however, the system itself is here to stay for the foreseeable future.

Source: Cole, M. (2006). *Democracy in Britain*. Edinburgh, UK. Edinburgh University Press.

39. Which of the following is closest in meaning to the underlined word “ratification” in paragraph 1?
 - a. emergence
 - b. enactment
 - c. performance
 - d. sanction
40. Why does the author quote a professor in paragraph 1?
 - a. to emphasize the number of countries where democracy is understood differently
 - b. to make it explicit that democracy is more widely practiced than before
 - c. to illustrate the range of political parties bearing democracy in their names
 - d. to exemplify the diverse use of the concept of democracy in the world

41. Which statement is true according to paragraph 2?
- Ideally, the same number of countries should be distributed to the four groups.
 - In the world, limited numbers of people are actually enjoying full democracy.
 - The author does not fully approve of the evaluation criteria of the Democracy Index.
 - The reality is that Asian countries are generally more democratic than Western countries.
42. Which statement is true about the comparison between the Democracy Index introduced in paragraph 2 and the Freedom in the World report in paragraph 3?
- Both evaluate the extent of democracy throughout the world although the criteria themselves differ.
 - The largest difference can be found in the numbers of categories they employ.
 - The two are similar in that they regard the same Western and Asian countries as most democratic.
 - The number of “full democracy” countries in one report corresponds to that of “free” countries in the other.
43. Which of the following is NOT mentioned as an influence of COVID-19 in paragraph 4?
- applying quarantine rules that led to constraints on elections
 - postponing or calling off elections in many countries
 - limited competitiveness in some countries such as Burundi
 - government restrictions on people’s general freedom
44. Which of the following can be inferred from paragraph 4?
- The institutions which define democracy differently should negotiate and come to an agreement.
 - Elections were the most severely influenced aspect of democracy as a result of the pandemic in 2020.
 - The restrictions on freedom in 2020 were as severe as during wartime.
 - International election observers are responsible for ensuring the validity of some elections.
45. Which of the following is true based on paragraph 5?
- It would be impossible to find evidence to support the view that one political system is generally preferable to another.
 - The complaints about democracy are, as evidenced by such countries as New Zealand and South Korea, justified.
 - The presidential election in the United States in 2020 was one example of a healthy political activity.
 - The way in which democracy adapted to the difficult situation in 2020 is comparable to authoritarian regimes.
46. What is the best title for this passage?
- Core Values of Democracy and Related Issues
 - Historical Views on Democracy and Their Recent Repercussions
 - What Democracy is and How Democratic Countries Reacted to COVID-19
 - Pros and Cons of Evaluating Democratic Countries

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Text 3

1. Sixty-six million years ago the earth was struck by an asteroid the size of Manhattan. This story is familiar to many, largely as it has become the most widely accepted theory for the extinction of non-avian dinosaurs. It caused a mass extinction event that led to the loss of seventy-five percent of all plant and animal species on the planet. While scientists have long understood the effects of the meteorite strike in temperate zones, little was known about how the event affected tropical regions. However, a recent study conducted in South America suggests that forests there changed dramatically after the impact of the asteroid. The study seems to have answered the question of when and how the Amazon rainforest as we know it today emerged.
2. The authors of the study reveal very different portrayals of the forest before and after the asteroid collision. The research indicates that before the impact, the forest consisted mostly of conifers and other seed-bearing plants, known as gymnosperms. These are plants that produce exposed seeds, rather than seeds enclosed within flowers or fruit. Conifers, for instance, produce cones that contain the non-encased seeds. The forest also had an open canopy, meaning the trees were widely spaced and sunlight could reach the forest floor. However, plant diversity in the area decreased by approximately forty-five percent after the meteorite strike, with many gymnosperms becoming extinct.
3. The recovery of the forest was a slow process, taking six million years to reach the previous level of diversity. Furthermore, different species flourished after the asteroid strike, with eighty-five to ninety percent of the new plant diversity made up of angiosperms. These flowering plants, which still dominate in the Amazon, also altered the structure of the rainforests by creating a much denser canopy as they competed for light. Thus, the impact of the asteroid set the forest on a new evolutionary path to the closed canopy, flower-packed Amazon familiar today.
4. The scientists established these findings by analysing approximately 50,000 fossil pollen grains and 6,000 leaf fossils. The samples were collected from rocks that had formed before the asteroid strike, in the Late Cretaceous period, and after the collision, in the Paleogene period. By examining the fossil pollen grains and the leaf fossils from each period, the scientists were able to characterise the types of plants that had produced them.
5. They also used other techniques to determine the structure of the forest in these two periods. One technique measured the density of veins on the leaves. The leaf samples dating from the Late Cretaceous period displayed similar vein densities, suggesting an open canopy. The leaves from the Paleogene period had a higher range of vein densities. This indicates a closed, stratified canopy as leaves at the top contain more veins to utilise the available sunlight, while those lower down in darker conditions have fewer veins. Another technique measured how much sunlight was available to the leaves by comparing the ratio of two carbon isotopes, Carbon-12 and Carbon-13. Leaves from forests with an open canopy are likely to have consistent ratios of the two isotopes. On the other hand, those from a closed canopy forest have a higher ratio of Carbon-13 isotopes as some of the leaves receive large amounts of solar radiation while others further down receive very little.

6. Based on their findings, the researchers offer several theories as to how the changes in the forest took place. One involves the absence of dinosaurs in the post-asteroid world. It is thought that dinosaurs had helped to maintain an open canopy in the forest by trampling down and feeding on the vegetation. Another theory suggests that ash that fell from the sky after the impact, or from life on the ground that was incinerated, might have enriched the nutrients in the soil. This would have given the faster-growing angiosperms an advantage over the gymnosperms. A third theory is simply that the extinction of the biggest trees in the forest, the conifers, provided an opportunity for the angiosperms to fill the gap. The authors believe that these explanations are not mutually exclusive. All, or some combination of the three, may have contributed to creating the dominance of the flowering plants in today's South American rainforests.
7. This study reveals fascinating insights into the past, but also offers a warning. Many scientists argue that we are currently in another mass extinction event. Rather than being caused by an asteroid, this time it is being caused by human activity. Deforestation is occurring in the Amazon rainforest at such an alarming rate that large areas of it are vanishing every day. While the study shows that tropical ecosystems can recover and evolve after a catastrophe, the process is incredibly slow and can drastically change biodiversity. The Amazon plays an integral role in regulating the freshwater cycle and climate on the planet. We need to seriously reflect on how our impact may irreversibly change the composition and activity of rainforests.
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47. Based on paragraph 1, which of the following is true regarding the asteroid collision?
- a. It hugely transformed the characteristics of some forests.
 - b. It undoubtedly caused the extinction of non-avian dinosaurs.
 - c. Research has not been done on its effect in tropical areas.
 - d. The loss of plant and animal life it caused occurred immediately.
48. Which of the following can be inferred about the Amazon rainforest after the asteroid strike?
- a. The number of gymnosperms decreased by 45%.
 - b. The previous level of plant diversity was never fully restored.
 - c. Plants with seeds enclosed in flowers and fruits became the dominant species.
 - d. The canopy structure was relatively unchanged.
49. Which of the following best describes the main topic of paragraph 4?
- a. how the scientists identified the plant species in the forest before and after the asteroid strike
 - b. how the scientists established the structure of the forest before and after the asteroid strike
 - c. how the scientists collected the samples of leaf fossils and fossil pollen
 - d. how the scientists dated the fossil samples in the rocks to the Late Cretaceous and Paleogene periods

50. Which of the following is true about the results of the leaf vein analysis described in paragraph 5?
- Leaves with a high density of veins are usually found in darker conditions.
 - Consistent leaf vein densities indicate that the forest had an open canopy.
 - Sunlight was more equally available to all leaves in the forest after the asteroid strike.
 - Leaves from the forest before the asteroid strike had a higher range of vein densities.
51. Which of the following is likely to be true about the two carbon isotopes in the Amazon today?
- There is a higher ratio of the Carbon-12 isotope in the leaves.
 - There is a higher ratio of the Carbon-13 isotope in the leaves.
 - There is a consistent ratio of the Carbon-12 and Carbon-13 isotopes in the leaves.
 - There is more solar radiation and therefore there are higher ratios of both isotopes.
52. Which of the following is true about the theories on how the changes in the Amazon occurred after the asteroid strike?
- It is likely that only one of the theories was responsible for the changes.
 - Fewer dinosaurs restricting vegetation growth meant the forest canopy was more open.
 - Angiosperms helped enrich the soil, which further promoted their growth.
 - Reduced competition from gymnosperms encouraged the growth of angiosperms.
53. Which of the following best describes the author's main message in paragraph 7?
- Human activity is again causing a mass extinction event.
 - Deforestation is a serious concern in the Amazon and other rainforests.
 - Tropical ecosystems cannot restore themselves after sustaining major damage.
 - Human activity in the Amazon could affect the vital role it plays on life on earth.
54. Which of the following would be the most appropriate title for this passage?
- How a Study Revealed the Recovery Process of Ecosystems after Mass Extinction Events
 - Learning from Past Mass Extinction Events: How to Protect Rainforests in the Age of Deforestation
 - How a Mass Extinction Event Sparked the Evolution of the Modern Amazon Rainforest
 - Three Theories to Explain the Emergence of the Amazon Rainforest after a Mass Extinction Event

(このページは空白です。)

PART II

次の文章には12の空欄 (55-66) があり、25ページに各空欄に対する4つの選択肢が与えられています。各空欄に最も適切と思われる答えを1つ選び、解答用カードの相当欄をマークして下さい。

Today, approximately 500,000 tonnes of synthetic dyes (55) each year. Dyes are essential in a variety of fields, such as the printing, food and textile industries. The textile industry also has an interesting historical connection to dyes, as it played an important role in the origins of the synthetic dye industry. The thriving textile industry in the mid-nineteenth century (56) the demand for natural dyes far exceeded the supply, creating the need for the mass production of cheaper, more reliable dyes.

Clothes have been coloured with natural dyes for centuries. These dyes were mostly derived from plants, vegetables and insects. An interesting example is Tyrian purple, which was produced by collecting a secretion from several (57) of sea snails. It took tens of thousands of these molluscs to produce just a few grams of dye. (58), garments coloured in Tyrian dye were only available to the richest and most powerful in ancient Greece and Rome, and the colour is still associated with royalty today. (59) this is an extreme example, it illustrates the slow, inefficient and expensive process of creating natural dyes.

The increasing demand for dyes in the mid-nineteenth century made it the ideal time for William Henry Perkin to make an accidental, (60) hugely important, discovery. Perkin was a young English chemistry student working in a small home laboratory in his attic. He was attempting to (61) quinine, a drug that was known to treat malaria but was extremely difficult to obtain naturally. He hoped to achieve this by experimenting with aniline, an organic compound which was derived from coal tar, a waste product of burning coal to produce gas. It was difficult to dispose of coal tar, so Perkin, encouraged by his university professor, was trying to (62) if anything valuable could be made from it.

Unfortunately, rather than producing quinine, Perkin was left with a sticky black substance and a (63) failed experiment. However, when he washed the test tubes, he was astonished to notice a vivid purple colour (64) on the glass. To his further surprise, he found that this colour also stained cloth and silk. Perkin had accidentally produced a synthetic dye and immediately realised the significance of his discovery. He patented the dye in August 1856, (65) it mauveine as the colour it produced was similar to mauve. Perkin was subsequently at the forefront of the new synthetic dye industry, setting up his own factory in order to manufacture dyes on an industrial scale.

That dye industry continues to (66) today. The global synthetic dye market is expected to grow from almost seventeen billion dollars in 2020 to over twenty-two billion in 2025. The industry has certainly come a long way since William Perkin accidentally discovered his synthetic dye back in 1856.

55.	a. are produced b. are producing c. is produced d. is producing	56.	a. meant b. predicted c. presented d. related	57.	a. specialisations b. species c. specifications d. specifiers
58.	a. As a result b. In the meantime c. Nevertheless d. Similarly	59.	a. Consequently b. No matter how c. On the other hand d. While	60.	a. besides b. so c. then d. yet
61.	a. eliminate b. incorporate c. market d. synthesise	62.	a. consult b. disprove c. determine d. invalidate	63.	a. deliberately b. negatively c. seemingly d. variably
64.	a. leave b. leaving c. left d. to leave	65.	a. named b. names c. naming d. to name	66.	a. increase b. prosper c. rise d. survive

