第 1 問から第 4 問では、問題文の中の [　　] 内の数字はマークシートの問番号を示している。該当する問番号の解答記入欄に答をマークしなさい。

第 1 問　次の問 1 ～ 6 の空所 [　1　] ～ [　6　] に入れるのに最も適切なものを (1) ～ (4) から 1 つ選び、その番号をマークしなさい。

問 1.　After he won, his rival could not [　1　] congratulate him.

(1) better　　(2) but　　(3) too　　(4) worse

問 2.　I love talking with him, but it is unfortunate that I seldom if [　2　] have a chance to do so.

(1) any　　(2) ever　　(3) not　　(4) so

問 3.　When traveling, it is important to follow local [　3　].

(1) customs　　(2) habits　　(3) patterns　　(4) tastes

問 4.　My house is within five minutes [　4　] the nearest station.

(1) at　　(2) away　　(3) in　　(4) of

問 5.　The kidnappers [　5　] good on their promise to release the hostages.

(1) got　　(2) let　　(3) made　　(4) took

問 6.　[　6　] to solve this difficult question, I had to ask my teacher for help.

(1) Impossible　　(2) Incapable　　(3) Unable　　(4) Unimaginable

第 2 問　次の問 1 ～ 4 においては、それぞれ日本語の意味に合うように下の(1)～(7)の語句を並べかえて空所を補い、適切な文を完成させなさい。解答は [　7　] ～ [　14　] に入れるものの番号のみをマークしなさい。ただし文頭にくる文字も小文字にしてある。

問 1.　彼女が去年もっと早く受診していれば、手遅れになる前にガンが見つかっただろうに。

＿＿＿ [　7　] ＿＿＿ ＿＿＿ [　8　] ＿＿＿ ＿＿＿, her cancer would have been found before it was too late.

(1) been　(2) earlier　(3) examined　(4) had
(5) last　(6) she　(7) year

問 2.　出発の 1 週間前に車を修理してもらった。

＿＿＿ ＿＿＿ [　9　], ＿＿＿ ＿＿＿ [　10　] ＿＿＿.

(1) a week　(2) before　(3) had　(4) I
(5) I left　(6) my car　(7) repaired

問 3.　そこから見た入り江は素晴らしい景色だった。

The bay ＿＿＿ ＿＿＿ [　11　] ＿＿＿ ＿＿＿ [　12　] ＿＿＿ splendid spectacle.

(1) a　(2) as　(3) from　(4) it
(5) that spot　(6) was　(7) was seen

問 4.　その本はこの分野でそれらについて詳述した最初のものである。

That book ＿＿＿ ＿＿＿ [　13　] ＿＿＿ ＿＿＿ [　14　] ＿＿＿ in this field.

(1) dwell　(2) first　(3) is　(4) on
(5) the　(6) them　(7) to

第 3 問 Read the interview transcript and answer the questions that follow.

Jennifer: We are now joined by Kevin Parker, CEO of HireVue. Kevin, what exactly does HireVue do?

Kevin: HireVue is a company whose primary focus is to make interviewing more (　あ　). And the primary way we do that is through on-demand interviews. Whereas in-person interviewing restricts candidates and employers based on time and location constraints, our system allows candidates to interview for jobs at any time of day and from any location.

Jennifer: I know that your clients are not looking to fill a couple of open positions but rather, they're often trying to interview thousands of people at once. When I spoke to you earlier, you gave an example of a customer who was interviewing 50,000 people for jobs in 15 hundred locations… over a weekend. Do you believe the way your company does this is fairer than the way most humans conduct job interviews?

Kevin: Structured interviewing is the most effective way to hire.

Jennifer: Could you explain what you mean by that?

Kevin: Ask every candidate the same question in the same way, and make sure that the questions are related to the job they're interviewing for and the skills that they have. And so it's the ability to deliver structured interviewing on a large scale that really matters. And we can do that with video, so interviewers can record questions that could be reused multiple times.

Jennifer: To kind of peel that back again — it makes it sound like it's just a video recording of a person asking a question, but there's more to it than that. Your company is also processing what's happening on the other end. Is that right?

Kevin: What we're really looking at there is the words the candidate is using to describe their team orientation or their ability to work independently or their problem-solving skills. So we can assess individual competencies for candidates, and we can use those algorithms to understand the answers that they're giving.

Jennifer: Can you tell me more about the algorithms?

Kevin: HireVue's algorithms are trained on top, middle, and low performers and are looking for the differences between them. The algorithms then compare new video interviews of job applicants against that data. Unlike some other vendors, our AI does analyze the actual content of what people say unless a client chooses not to use that feature. It also tries to examine other cues in their voices.

https://www.technologyreview.com/2021/07/07/1027952/podcast-want-a-job-the-ai-will-see-you-now/ (改変あり)

問 1. Based on the context within the interview, which word best fits (あ)? Write the number of your answer in [15].

(1) accessible (2) complicated (3) interpersonal (4) traditional

問 2. Which of the following is the closest to what is mentioned about structured interviewing during the interview? Write the number of your answer in [16].

(1) Candidates can ask questions about the job and required skills.
(2) It offers much more practicality than interviewing that utilizes video.
(3) It provides consistency regarding how the questions are asked.
(4) The goal is for candidates to give the same answer for each question.

問 3. Which of the following is NOT mentioned during the interview? Write the number of your answer in [17].

(1) HireVue's system analyzes words that candidates use when they answer questions during an interview.
(2) HireVue's system benefits companies that conduct large-scale job interviews in different places.
(3) HireVue's system enables the candidates to reuse their responses provided to interview questions.
(4) HireVue's system offers flexibility regarding the time of day that job interviews take place.

問 4. Which of the following is the closest to what is mentioned during the interview? Write the number of your answer in [18].

(1) HireVue's algorithms allow candidates to choose which interview questions they will be asked.
(2) HireVue's algorithms enable candidates to improve their problem-solving skills during interviews.
(3) HireVue's system has the ability to evaluate the content of answers that are provided by candidates.
(4) HireVue's system works best for companies that are interviewing a small number of job candidates.

第 4 問　Read the article and answer the questions that follow.

Researchers have developed a methodology for quantifying landscape changes on barrier islands and, in doing so, have found the storms that can devastate human infrastructure also create opportunities for coastal wildlife to thrive.

"Our goal for this project was to develop a method to quantify land cover changes from natural processes and storms on barrier islands," says Beth Sciaudone, co-author of the study and a research assistant professor of civil, construction and environmental engineering at North Carolina State University. "Ultimately, tracking and understanding these land changes can help us identify areas of coastal highway that are especially prone to damage. It could also help us better understand how natural processes and infrastructure projects affect coastal wildlife habitat."

For this study, the researchers focused on Pea Island National Wildlife Refuge, on North Carolina's Outer Banks. Specifically, the researchers made use of detailed, color-infrared images of the island that were taken each year from 2011 through 2018. These images allowed them to track changes in land cover across the island. The images were also used to create terrain models that let researchers assess changes in topography across the island.

Using these tools, the researchers were able to assess the land cover on the island and divide it into a dozen categories, such as beach, vegetated sand dunes, marsh and estuarine ponds. They could then measure the amount of each land-type on the island and how it changed over time. For example, there might be five total acres of marsh, including one acre of estuarine pond that had shifted to marsh over the past year.

But the researchers also noticed something else regarding the relationship between storms and wildlife habitat.

The images highlighted the extent to which Hurricane Irene in 2011, and Hurricane Sandy in 2012, reshaped Pea Island National Wildlife Refuge.

"We already knew that bare sand is good wildlife habitat for many coastal species, but this work (　あ　) both how storms create habitat and how long that habitat lasts," Sciaudone says.

What the researchers found was that, on barrier islands, a lot depends on which direction the storm is coming from. For example, Hurricane Irene hit Pea Island from the Pamlico Sound to the west, while Hurricane Sandy hit the island from the Atlantic Ocean to the east. Both storms caused noteworthy changes in land cover. However, the long-term impact of the two storms has varied significantly.

When Hurricane Sandy wiped out vegetation, creating areas of bare sand, it took three to four years for the vegetation to recover. Meanwhile, Hurricane Irene fundamentally changed the hydrodynamics on the western side of the island, increasing the amount of habitat hospitable for shorebirds and other coastal species.

"Evaluating these habitat changes directly informs conservation management decisions on the refuge and helps us prioritize resource protection and restoration actions," says Rebecca Harrison, co-author of the study and supervisory refuge wildlife biologist at the refuge for the U.S. Fish & Wildlife

Service.

“The methodology that we’ve developed here could be used to help quantify changes on barrier islands anywhere,” Sciaudone says. “And working with regional wildlife experts can help us understand what those land cover changes mean for habitat.”

“The takeaway is that we need to ensure our efforts to build and preserve coastal infrastructure take into account the role that coastal erosion and related natural processes play in creating and preserving wildlife habitat — and the work we’ve done here can inform that sort of decision-making.”

https://www.sciencedaily.com/releases/2021/09/210928102249.htm (改変あり)

注 barrier island: バリアー島 (海岸線の前に岸と並行に伸びる島で、陸を海から守るような形をしている)
land cover: 土地被覆、地表面の物理的状態 (コンクリート、森林、草地、水面、土壌など)

color-infrared: 赤外カラーの	terrain: 地形	topography: 地勢
sand dune: 砂丘	marsh: 沼地	estuarine: 河口の
reshape: ～を作り変える	hydrodynamics: 水の動態	hospitable: 好適な
shorebird: シギ・チドリ類	prioritize: ～に優先順位をつける	takeaway: 結論

問 1. Choose the meaning of the underlined word “prone” that best fits the context within the article. Write the number of your answer in [19].

(1) designed (2) hard (3) resistant (4) vulnerable

問 2. Based on the context within the article, which phrase best fits (あ)? Write the number of your answer in [20].

(1) contradicted the fact of (2) made an impact on
(3) made an objection against (4) shed light on

問 3. Which of the following is NOT possible based on the results of this project? Write the number of your answer in [21].

(1) to classify land cover on the island
(2) to identify changes in the topography throughout the entire island
(3) to predict when the next storm will hit the island
(4) to understand how coastal wildlife habitat is affected

問 4. Which of the following is the closest to what is stated in the article about the relationship between storms and wildlife habitat? Write the number of your answer in [22].

(1) The higher the percentage of land that faces the ocean, the more susceptible wildlife habitat is to storms.
(2) The kind of impact on wildlife habitat depends on which direction the storm comes from.
(3) The more frequent the storm, the harder it is for creatures to live in their habitat.
(4) The time it takes for wildlife habitat to recover varies depending on the strength of storms.

この後の第 5 問と第 6 問は記述用解答用紙に解答しなさい。

第 5 問　次の英文を読み、後の問いに答えなさい。

第５問の問題文は、著作権の都合により
掲載しておりません

（前頁の続き）
第５問の問題文は、著作権者の都合により
掲載しておりません

https://presse.inserm.fr/en/using-tools-improves-our-language-skills/44084/ (改変あり)

注　syntax: 文の組み立て　proficient: 熟達した　motor: 運動の
vice-versa: 逆もまた同様　mobilize: ～を動員する　revisit: ～を再考する
paleo-neurobiology: 古神経生物学　boom: 急発展　pliers: ペンチ
basal ganglia: 基底核　peg: 釘　orientation: 方向
relative pronoun: 関係代名詞

問 1. 下線部《A》の研究の動機はどのようなものと考えられるか、本文の内容に即して日本語で述べなさい。

問 2. 下線部《B》を示すための実験では、研究者たちは何を行ったか。本文の内容に即して、以下の空欄に被験者がしたことを日本語で記入し、説明を完成させなさい。

(i) テストの結果を (ii) 訓練の前後で比較した。

問 3. 下線部《A》の研究は、人類史における言語の発達についてどのようなことを示唆するか、本文の内容に即して日本語で述べなさい。

問 4. 次の段落は本文のどの位置に置くのが最も適切か、【あ】～【お】の記号で答えなさい。

In 2019, Inserm researcher Claudio Brozzoli in collaboration with CNRS researcher Alice C. Roy and their team had shown that individuals who are particularly proficient in the use of tools were also generally better at handling the finer points of Swedish syntax.

注　proficient: 熟達した　syntax: 文の組み立て

第 6 問　次の英文を読み、下線部 (1) ～ (3) の日本語の内容を英語にしなさい。

Flash floods usually happen during intense rainfall — when the amount of water is too much for drains and sewers to deal with.

It can occur very quickly and without much warning.

Roads can become unpassable — with vehicles abandoned — and homes and shops damaged by floodwater.

Floods can affect key public infrastructure including transport networks and hospitals. In London, some hospitals had to ask patients to stay away after they lost power.

Urban areas are more likely to experience this type of "surface water" flooding because they have a lot of hard surfaces — everything from paved front gardens to roads, car parks and high streets.

When rain hits them it can't soak into the ground as it would do in the countryside.

An example was seen when New York City was hit by Storm Elsa in July 2021, flooding the subway system.

The city's transit authority president, Sarah Feinberg, said "if the drains at the street level can't handle the water, it goes over the curb and then makes things even worse". Water had come through subway vents and down the stairs, she said.

In many places — including much of the UK — old sewer systems were built based on historic rainfall projections.

Dr Veronica Edmonds-Brown of the University of Hertfordshire says (1) ビクトリア朝(Victorian era)の排水体系では大幅な人口増加に対処できないので、ロンドンの成長もまた問題である.

Many factors contribute to flooding, but climate change makes extreme rainfall more likely.

A warmer atmosphere can hold more moisture and so these storms become more intense.

According to Prof Hayley Fowler, of the UK Climate Resilience Programme, flash flooding used to be "relatively unusual".

But she says (2) 温暖化の結果、フラッシュフラッドの原因となる激しく短時間の突発的土砂降りが、より頻繁に見られるようになっている.

Ms Fowler's research suggests flash floods — measured as 30mm of rain per hour — "will increase fivefold by the 2080s", if climate change continues on its current track.

Changes could be made in towns and cities to protect against the worst effects of flash floods.

Dr Linda Speight, a flood expert at Reading University, says urban areas could benefit from changes like "permeable pavements and green roofs that can help rainwater to soak away rather than causing floods".

(3) 豪雨の接近を把握することで、フラッシュフラッドの危険を減らしやすくなるかもしれない。

Dr Speight says "weather and flood forecasting science has improved rapidly and it is now often possible to forecast surface water flooding events in advance".

https://www.bbc.com/news/science-environment-57969877 (改変あり)

From BBC News at bbc.co.uk/news