

2024 年度 国際経営学科

英 語

〔自己推薦 A O (A)〕 14-J 1

注 意

1. 監督者の合図があるまで問題冊子は開かないでください。
2. 解答はすべて解答用紙のきめられた箇所に記入してください。

Read the passage and answer the questions that follow.

June 2023 was the Earth's hottest—ever. July saw the trend continue. The extreme summer temperatures made me wonder: Just how much heat can the human body stand? Deaths from heat are pretty common and, as the world heats up, may become more so if we don't develop a plan for extreme heat days, like the kind of warning system that usually comes before a major hurricane or blizzard. In 2019, approximately 469,000 people worldwide died from overheating, according to a paper published in 2021 in *The Lancet*.

Whether a certain temperature can kill depends on humidity, wind speed, and direct exposure to sunlight, as well as a person's level of physical activity, body size, and clothing. Temperatures reportedly reached 48.3°C where a man and his young son died hiking this June in the US state of Texas, but just 41.7°C when a young couple, their baby daughter, and the family dog all died in 2021 while hiking in California. The young parents had brought what seemed like enough water. When they started their hike, the temperature was only in the low 20s. They had planned to be home before it got really hot. The hike started downhill, but getting back to their car required a 700m climb up a slope in direct sunlight. They never made it.

Our bodies cool off by sending blood to the skin, where it releases heat into the air. But that only works until the air temperature is about 35°C, which is as hot as your skin can get. Then there's only one way to cool off, which is to sweat. The sweat isn't what cools you—it's the process of sweat evaporating. If the humidity gets too high, evaporation doesn't occur, and sweat collects on your skin and drips. Humans will start to cook in their own body heat at the equivalent of 35°C with 100% humidity. The elderly, the very young, and people with illnesses can suffer heatstroke* at lower temperatures.

Ollie Jay, director of the Heat and Health Research Incubator at the University of Sydney, says he's devised a five-level "heat stress" warning scale to alert people if the danger is low, moderate, high, very high or extreme. These levels would be based on a

combination of the temperature, wind, sun exposure, and humidity to warn people when those factors line up in a deadly combination. Alerts could be sent to phones and sent out on television. An interactive app could allow people to check the risk level of various activities such as running or hiking. But Jay says it's most important to reach people at the greatest risk, some of whom may need to get a more basic warning on television.

Heat has been killing people for decades—especially in cities acting as heat islands. As the Earth gets hotter, that will put more pressure on city officials to use heat warning systems, public cooling centers, and science-based regulations aimed at preventing heat from killing us.

Adapted from: Carmichael, S. G. (2023, July 12). How much heat can the human body stand? *The Japan Times*. <https://www.japantimes.co.jp/opinion/2023/07/12/commentary/world-commentary/climate-change-heat/>

*heatstroke 熱中症

For Q1~Q10, write the letter (a, b, c, or d) of the best answer on the answer sheet.

Q 1 . What is the main point of the passage?

- a . Hiking in hot weather is dangerous.
- b . People need to check warnings before doing outdoor activities.
- c . Summer heat kills as many people as hurricanes and blizzards.
- d . The combination of several weather conditions can be deadly.

Q 2 . The purpose of the text is to ____.

- a . argue
- b . describe
- c . inform
- d . persuade

- Q 3. According to the passage, if a plan for extreme heat is developed, deaths from heat ____.
- a . might be as common
 - b . might not be so common
 - c . would be fairly common
 - d . would not be as common
- Q 4. Which of the following does NOT influence the ability of heat to kill?
- a . clothing
 - b . doing sports
 - c . humidity
 - d . sunshine
- Q 5. The young parents mentioned in the passage ____.
- a . died in their hot car
 - b . got home before dark
 - c . had too much water
 - d . started hiking at the top of a hill
- Q 6. What can you infer from the passage?
- a . Humidity can be as dangerous as temperature.
 - b . If your skin temperature is above 35°C, you will sweat.
 - c . It's difficult to cool down when evaporation occurs.
 - d . People like to cook in hot weather.

Q 7 . What is true about humidity and temperature?

- a . Both can be determined by alerts.
- b . Neither one can kill you.
- c . One can make the other more dangerous.
- d . They killed the highest number of people in 2019.

Q 8 . Who would be most helped by a more basic “heat stress” warning?

- a . Families.
- b . Hikers.
- c . The elderly.
- d . The father and son who died hiking.

Q 9 . _____ can be deadly.

- a . Any temperature
- b . Even low temperatures
- c . Humid temperatures
- d . Most temperatures

Q10. What does “it” refer to in “They never made it”?

- a . Dinner.
- b . Enough water.
- c . Home.
- d . To the car.

For Q11, write your answer on the answer sheet.

Q11. Write an essay of 150-200 words explaining measures you took to avoid heatstroke this past summer.