2022 年度 大学院理工学研究科 【生命理学専攻/環境共生工学専攻】 博士前期課程 一般選抜試験(第Ⅱ期)問題



開始時刻	午前10時00分
終了時刻	午前 11 時 00 分

【注意事項】

- 1. 答案用紙には、氏名を必ず記入してください。
- 2. 配布された答案用紙は試験が終了したら、必ず提出してください(問題用紙は提出しなくてよい)。

3. 問題番号が明記された答案用紙を使用し、解答してください。

問1:次の文章を読んで、以下の問いに答えなさい。

Japan saw tsunami waves of about 1 meter [A] in coastal areas on Sunday but no major damage or flooding after the eruption of an underwater volcano off Tonga led to evacuation orders for nearly 230,000 citizens.

Japan's weather agency issued tsunami warnings and advisories in the early hours for the Pacific coast from Hokkaido to Okinawa, but these were all lifted in the afternoon. The agency said slight sea-level fluctuations may continue for some time, but there is no risk of disaster. Up to 229,000 people in eight prefectures – Aomori, Iwate, Miyagi, Chiba, Tokushima, Kochi, Miyazaki and Kagoshima – were asked to flee from the seaside, according to the Fire and Disaster Management Agency.

A 1.2-meter wave was observed on Amami Island in Japan's southwest shortly before Saturday midnight, while a 1.1-meter $_{(B)}$ one later arrived in Iwate Prefecture in the northeast which was affected by the deadly earthquake and tsunami more than a [C] ago. $_{(D)}$ Train, air and maritime transport services were affected, with 27 Japan Airlines domestic flights including to and from Amami canceled. A total of 22 ships in Kochi Prefecture, western Japan, were found to have capsized or drifted.

A volcano about 65 kilometers north of Nuku'alofa erupted Saturday, with the entire island nation reportedly hit by tsunami as high as 80 centimeters. Nuku'alofa has been covered in a thick film of volcanic dust, sparking concerns around access to clean drinking water and respiratory issues.

Tsunami of about 1 meter reached New Zealand, and more than 1 meter for Pacific islands such as Vanuatu, as well as Chile. In Alaska and California, tsunami waves of more than 1 meter were also observed, according to the U.S. National Oceanic and Atmospheric Administration. However, there have been no reports of major damage or casualties. (Modified from Kyodo News; January 16, 2022)

【用語】advisories: 勧告、lifted: 解除された、fluctuations: 揺れ、flee: 避難する、 capsized: 転覆した

(1) 文章中の[A]に入る最も適切な語句を、次の中から一つ選びなさい。

	i. long	ii. high	iii. apart	iv. loud
(2)	下線部(B)の意味す	る最も適切な語句を、	次の中から一つ選び	びなさい。
	i. wave	ii. eruption	iii. ship	iv. prefecture

(3) 文章中の[C]に入る最も適切な語句を、次の中から一つ選びなさい。

i. century ii. eleven years iii. past iv. decade

- (4) 下線部(D)を日本語に訳しなさい。
- (5) この噴火の影響で津波が到達した日本以外の国名を2つ挙げなさい。

問2:次の文章を読んで、以下の問いに答えなさい。

Chemical Bonding

Only the elements called the (A)noble gases, which fall in the extreme right-hand column of the periodic table, (B)prefer to exist as isolated atoms. (C)The atoms in a pure element usually bond with one another to form a solid (carbon atoms in diamond), a liquid (mercury atoms in liquid mercury), or a gas (hydrogen molecules, H₂, in hydrogen gas). Different elements may also react to make compounds that contain different types of atoms bonded to each other. A chemical bond arises when the forces between the electrons and nuclei of two atoms pull them together. Chemical reactions involve the making and breaking of chemical bonds.

Two hydrogen atoms bond together readily and form H_2 gas. This gas is stable by itself; when oxygen is present, however, (D)it may react violently and form water. Combustion of hydrogen occurs because the chemical bonds in water are stronger than those in the hydrogen and oxygen molecules. Spontaneous chemical changes always proceed in such a way as to yield products that are more stable than the reactants.

[用語] fall in 整列する, element 元素, mercury 水銀, spontaneous 自発的な

- (1) 下線部(A)を日本語に訳しなさい。
- (2) 下線部(B)を日本語に訳しなさい。
- (3) 下線部(C) を日本語に訳しなさい。
- (4) 下線部(D) を日本語に訳しなさい。

問3:次の英文が下に示す和文を意味するとき、カッコ内に入れるのに適したもの を下の選択肢(A)~(D)から一つ選びなさい

- (1) He spends a lot of money () clothing. (彼はたくさんのお金を衣類に使う)
- (A) on (B) in (C) to (D) at
 - (2) I will find it for you in () days. (私は数日中に君のためにそれを見つけよう)
- (A) a few (B) few (C) a little (D) little
 - (3)() the crash, Dr. Watson could not return to Crew. (ワトソン博士は衝突事故のため、クルーに戻ることができなかった)
- (A) According to (B) With a view to (C) Because of (D) Because
 - (4) People often make use of fast foods, () instant noodles.
 (人々はよくインスタントヌードルのような、「ファーストフード」を利用する)
- (A) as much as (B) such as (C) like as (D) as fast as
 - (5)() the carriage was totally destroyed.(馬車の一部は完全に破壊された)
- (A) Some of (B) A piece of (C) Part of (D) A kind of