

1. 次の英文を読み、それに続く設問A-1からA-5までに答えなさい。解答は、それぞれの設問に続く選択肢1.から3.までのの中から答えとして最も適切なものを一つずつ選び、その番号のマーク欄を黒く塗りつぶしなさい。

The coastal waters of Oregon are shaping up to be key for advances in two forms of renewable energy: wave power and wind turbines that float. The way electricity is traditionally generated is a major cause of climate change, so clean alternatives are key to addressing it.

Wave energy is at an earlier stage than floating wind turbines, but the potential could be big. According to the National Renewable Energy Laboratory, marine energy, a term researchers use to refer to power generated from tides, currents or waves, is the world's largest untapped energy resource. The federal government announced it will invest over \$112 million to boost the design, fabrication and testing of wave energy devices. The work on floating wind turbines is further along, but still early, and encountering resistance. The only way to build offshore wind power on the West Coast is to use floating turbines. The ocean is too deep to affix traditional turbines to the seafloor, said Mark Severy, a research engineer at the Pacific Northwest National Lab who works on addressing challenges to offshore wind development in the U.S.

In Oregon, opposition from tribes, fishermen and coastal residents highlights some of the challenges with renewable energy offshore. The opposition is largely directed at the U.S. government's plans for floating wind turbines in two areas covering 790 square kilometers off Oregon's southern coast. Some in those communities are concerned that the construction will harm sea life, marine habitat, culturally important areas and views of the ocean. While the wind areas identified by the Bureau of Ocean Energy Management (BOEM) are miles from land, the lights used to illuminate the turbines at night would be visible from the shore, according to a BOEM visual simulation.

Oregon's wave energy test site hasn't sparked similar resistance. Burke Hales, the Oregon State professor serving as chief scientist for the site, attributed this to researchers working together with fishermen to identify the location for the site early in the approval process. One reason wave energy is still in its infancy and not yet competitive with wind, solar and geothermal power is because it is challenging for companies to develop projects that can withstand the harshest ocean conditions where the waves or currents are the strongest, then convert that movement to electricity efficiently and affordably.

Oregon Governor Tina Kotek has been working to ease tensions over wind development in her state and acknowledged that the federal government's process for developing it "hasn't started off on the right foot." But she said the state must explore renewable energy options — including floating offshore wind turbines — in order to meet its climate goals.

<注> untapped 未開発の fabrication 製造 affix 設置する geothermal 地熱の
start off on the right foot 初めからうまくいく

(設問)

A-1 How are Oregon's coastal waters expected to contribute to renewable energy development?

1. As the only source of hydroelectric power in the region
2. Through wave power and floating wind turbine development
3. By being shallow enough to support fixed wind turbines on the seafloor

A-2 How does the National Renewable Energy Laboratory describe marine energy?

1. Marine energy is the world's biggest unused energy resource.
2. Marine energy has been cultivated much earlier than wind turbine power generation.
3. Marine energy devices are already important, and further development will not be funded by the federal government.

A-3 What are some of the major concerns of the communities opposing the floating wind turbine plans?

1. The turbines are too close to the shore and the residents there will be affected by strong winds.
2. The turbines and their lights might damage sea life, marine habitats, cultural sites and ocean views.
3. The cost of installing wind turbines may affect the budgets of local governments, leading to tax increases.

A-4 According to Hales, why has Oregon's wave energy test site faced less opposition than the wind project?

1. Because no companies have tackled the development of efficient and affordable power generation
2. Because it uses technology that has already been proved to be competitive with solar and geothermal power
3. Because researchers collaborated with fishermen in choosing its location at an early stage of development

A-5 What does Governor Kotek believe about floating offshore wind turbines?

1. They must be included among the renewable energy options to achieve the state's climate goals.
2. They should be abandoned due to strong community opposition though their renewable energy is very attractive.
3. They may not be an attractive option but should be kept open until the stakeholders have reached an agreement.

2. 次の英文A-6からA-9までは、無線通信業務に関する国際文書の規定文の趣旨に沿って述べたものである。この英文を読み、それに続く設問に答えなさい。解答は、それぞれの設問に続く選択肢1.から3.までの中から、答えとして最も適切なものを一つずつ選び、その番号のマーク欄を黒く塗りつぶしなさい。

A-6 For transmissions carrying identification signals, in order that stations may be readily identified, each radio station shall transmit its identification as frequently as practicable during the course of transmissions, including those made for tests, adjustments or experiments.

(設問) When should radio stations transmit identification signals as often as reasonably possible for them to be readily identified?

1. When they transmit radio waves for tests or adjustments of equipment but not for experiments
2. When they transmit radio waves for tests, adjustments or experiments but not for communications
3. When they transmit radio waves for any kind of radio transmission, including tests or experiments

A-7 All stations which receive a distress alert or call transmitted on the distress and safety frequencies in the MF, HF and VHF bands shall immediately cease any transmission capable of interfering with distress traffic and prepare for subsequent distress traffic.

(設問) What is the primary obligation of stations receiving a distress alert on the frequencies so designated?

1. To immediately send their acknowledgement of the distress alert and prepare for further distress traffic
2. To continue their own transmissions regardless of their frequency bands while monitoring the situation
3. To stop any transmissions that might disrupt distress communication and get ready for further messages

A-8 Ship-to-ship distress alerts are based on the use of digital selective calling (DSC). Ship stations equipped for DSC procedures may transmit a distress call and distress message immediately following the DSC distress alert in order to attract attention from as many ship stations as possible.

(設問) For what purpose is a ship station allowed to transmit a distress call and message right after a DSC distress alert?

1. To increase the chances of being noticed by other ship stations
2. To inform nearby stations that the rescue operation has already started
3. To prevent errors caused by the repetition of the digital selective calling transmission

A-9 The officer in charge of the navigational watch shall ensure that range scales of the radar employed are changed at sufficiently frequent intervals so that echoes are detected as early as possible. It shall be borne in mind that small or poor echoes may escape detection.

(設問) How often should the navigational watch officer adjust the radar range scales to detect echoes as quickly as possible?

1. The range scales should be as constant as possible in all situations when the ship needs to detect echoes.
2. Adjustment of the range scales should be performed at sufficient intervals to detect echoes as early as possible.
3. The frequency of range scale adjustment should be kept constant so that the workload of the officer may be minimized.

3. 次の設問B-1の日本語に対応する英訳文の空欄（ア）から（オ）までに入る最も適切な語句を、その設問に続く選択肢1.から10.までの中からそれぞれ一つずつ選びなさい。解答は、選んだ選択肢の番号のマーク欄を黒く塗りつぶしなさい。

（設問）

B-1 日本のスタートアップ企業が、広島県の島々を繋ぐ定期航路で自律航行する水上バスの試行運用を開始した。その船は、AIやセンサー技術を活用した「AI船長」と呼ばれるプラットフォームを搭載していて、12人までの乗客と商品に乗せることができる。そのプロジェクトは、島しょ間のより良い、そしてより持続可能な交通業務の提供を目指している。

A Japanese startup has begun the trial (ア) of an autonomous navigation sea bus on a regular route connecting islands in Hiroshima Prefecture. The ship is (イ) with a platform called 'AI Captain', which (ウ) AI and sensor technology, and (エ) up to 12 passengers and merchandise. The project aims at providing better and more sustainable (オ) services between the islands.

- | | | | |
|-------------------|----------------|---------------|-------------------|
| 1. accommodates | 2. accumulates | 3. equipped | 4. operation |
| 5. orientation | 6. prepared | 7. stabilizes | 8. transformation |
| 9. transportation | 10. utilizes | | |

4. 次の設問B-2の日本語に対応する英訳文の空欄（ア）から（オ）までに入る最も適切な語句を、その設問に続く選択肢1.から10.までの中からそれぞれ一つずつ選びなさい。解答は、選んだ選択肢の番号のマーク欄を黒く塗りつぶしなさい。

（設問）

B-2 航海用カヌー「ホクレア」の乗組員たちがハワイに集まり、船の50周年を祝った。半世紀前に進水したこのカヌーは、星、波、天候を解読する航海の技術を復活させることにより、ハワイ文化に誇りを加える一助となった。アークトゥルス星を意味するハワイ語にちなんで「ホクレア」と名付けられたこのカヌーは、数十年後のディズニーの大ヒット映画「モアナ」にも影響を与えた。

Members of the voyaging canoe Hokulea gathered in Hawaii to celebrate the vessel's 50th birthday. A canoe (ア) half a century ago helped to add pride to Hawaiian culture, (イ) the skill of traveling the seas by (ウ) the stars, waves and weather. Named the Hokulea, (エ) the Hawaiian word for the star Arcturus, this canoe would even influence the Disney blockbuster "Moana" (オ) later.

- | | | | |
|---------------|--------------|-------------|------------|
| 1. after | 2. behind | 3. bounced | 4. decades |
| 5. decoding | 6. encoding | 7. launched | 8. periods |
| 9. retreating | 10. reviving | | |

5. 次の設問B-3の日本語に対応する英訳文の空欄（ア）から（オ）までに入る最も適切な語句を、その設問に続く選択肢1.から10.までの中からそれぞれ一つずつ選びなさい。解答は、選んだ選択肢の番号のマーク欄を黒く塗りつぶしなさい。

（設問）

B-3 検査職員は、退去する前に、船舶局若しくは船舶地球局を有する船舶、その他移動体の指揮者又は責任者に検査の結果を通告しなければならない。関連する無線通信規則の条項によって課される条件に違反することが認められた場合には、検査職員は、その通告を文書で行わなければならない。

Before leaving, the inspector shall report the result of his inspection to the master, or the person (ア) for the ship or other vessel (イ) the ship station or ship earth station. If any (ウ) of the conditions (エ) by the relevant articles of the Radio Regulations is (オ), the inspector shall make this report in writing.

- | | | | |
|-------------|-----------------|-------------|--------------|
| 1. admired | 2. breach | 3. carrying | 4. competent |
| 5. imposed | 6. objection | 7. observed | 8. operating |
| 9. reserved | 10. responsible | | |