

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。

Scientists have mapped the largest coral reef deep in the ocean, stretching hundreds of miles off the U.S. Atlantic coast. While researchers have known since the 1960s that some coral were present off the Atlantic, the reef's size remained a mystery until new underwater mapping technology made it possible to construct 3D images of the ocean floor. The largest yet known deep coral reef "has been right under our noses, waiting to be discovered," said Derek Sowers, an oceanographer at the nonprofit Ocean Exploration Trust.

Sowers and other scientists recently published maps of the reef in the journal Geomatics. The reef extends for about 499 kilometers from Florida to South Carolina and at some points reaches 109 kilometers wide. The total area is nearly three times the size of Yellowstone National Park.

The reef was found at depths ranging from 200 meters to 1,000 meters, where sunlight doesn't penetrate. Unlike tropical coral reefs, where photosynthesis products are important for growth, coral this far down must filter food particles out of the water for energy. Deep coral reefs provide habitat for sharks, swordfish, sea stars, octopus, shrimp and many other kinds of fish, the scientists said. Tropical reefs are better known to scientists — and snorkelers — because they're more accessible. The Great Barrier Reef in Australia, the world's largest coral reef system, stretches for about 2,301 kilometers.

Sowers said it's possible that larger deep-sea reefs will be discovered in the future since only about 25% of the world's ocean floor has been mapped in high-resolution. Only 50% of U.S. offshore waters have been mapped. Maps of the ocean floor are created using high-resolution sonar devices carried on ships. Deep reefs cover more of the ocean floor than tropical reefs. Both kinds of habitat are susceptible to similar risks, including climate change and disturbance from oil and gas drilling, said Erik Cordes, a marine biologist at Temple University and co-author of the new study.

<注> coral reef サンゴ礁 right under one's nose ～の目と鼻の先に oceanographer 海洋学者
nonprofit 非営利の photosynthesis 光合成 habitat 生息地 swordfish メカジキ
susceptible to ～の影響を受けやすい

(設問)

- A-1 Which of the following is the correct order, from largest to smallest, for the sizes of the newly found deep-sea coral reef, the Great Barrier Reef and Yellowstone National Park?
1. The deep-sea coral reef is first, Yellowstone National Park second, and the Great Barrier Reef third.
 2. The deep-sea coral reef is first, the Great Barrier Reef second, and Yellowstone National Park third.
 3. The Great Barrier Reef is first, the deep-sea coral reef second, and Yellowstone National Park third.
- A-2 According to the above article, what are the primary sources of energy and growth for the tropical and deep-sea corals?
1. Both depend on photosynthesis products although no sunlight reaches the deep seas.
 2. Tropical coral depends on seaweed, and deep-sea coral on small sea animals such as shrimps.
 3. Tropical coral depends on photosynthesis products, and the other on food particles filtered from the sea.
- A-3 What did Sowers say about the possibility of finding more deep-sea coral reefs?
1. Even bigger deep-sea coral reefs may be found in the future.
 2. Deep-sea coral reefs are susceptible to external disturbances and therefore harder to find.
 3. Since 50% of the world's ocean floors have been mapped, the total number is expected to double.
- A-4 How did the scientists map the largest coral reef deep in the ocean off the U.S. Atlantic coast?
1. They worked with divers and snorkelers who co-operated to lower high-resolution sonar devices.
 2. They used high-resolution sonar devices on board ships to construct 3D images of the ocean floor.
 3. They used computer simulation to create 3D images of the ocean floor using data obtained since the 1960s.
- A-5 According to Cordes's view, how do deep-sea coral reefs differ from tropical reefs in terms of their susceptibility to climate change and other external disturbances?
1. Both tropical and deep-sea coral reefs are influenced by climate change and other external disturbances.
 2. Unlike deep-sea coral reefs, tropical coral reefs are less susceptible to external disturbances such as oil drilling.
 3. Deep-sea reefs are less influenced by climate change though both kinds of coral reef are equally susceptible to other external disturbances.

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 Communications shall be concise and unambiguous, using standard phraseology whenever available. Abbreviated procedures should only be used after initial contact has been established and where no confusion is likely to arise.

(設問) Which of the following meets the above provision?

1. Standard phraseology need not be used after initial contact has been established.
2. Communications should be as short as possible even when there is some likelihood of confusion.
3. Abbreviated procedures can be used after establishment of initial contact when no confusion is likely to arise.

A-7 Stations in the radiolocation service in the band between 3230 kHz and 5003 kHz shall not cause harmful interference to, or claim protection from, stations operating in the fixed or mobile services. Applications of the radiolocation service are limited to oceanographic radars operating in accordance with the relevant ITU Resolution.

(設問) Which of the following is correct with reference to the above regulation?

1. An oceanographic radar can claim protection from stations operating in the fixed or mobile services.
2. Applications of the radiolocation service are not allowed except in the case of appropriately operating oceanographic radars.
3. Radiolocation service stations can claim protection from mobile or fixed radio stations only when operating in accordance with the relevant ITU Resolution.

A-8 The frequencies on which coast stations provide services using digital selective calling techniques shall be indicated in the List of Coast Stations and Special Service Stations.

(設問) What item or items does the above regulation require to be indicated in the List of Coast Stations and Special Service Stations?

1. The working hours of coast stations using digital selective calling techniques.
2. The frequencies on which services are provided by coast stations using digital selective calling techniques.
3. The formats of the selective calling methods that coast stations with digital selective calling equipment use.

A-9 Certificates shall be in the official language or languages of the issuing country. If the language used is not English, the text shall include a translation into that language.

(設問) What is the requirement for certificates to be issued in countries where English is not an official language?

1. Such certificates should only be written in English as properly translated by the authorized officials.
2. Such certificates shall be accompanied with a second certificate showing the holder's English language ability.
3. Such certificates shall be written in the official language or languages of the issuing country and an English translation shall be provided.

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9.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 パナマ運河は、太平洋と大西洋をつなぐ、極めて重要な海の近道である。パナマ運河の閘門システムのための主要な水源であるガトゥン湖は、雨水に頼っており、たび重なる深刻な干ばつのために水位が低下している。その結果、運河を通る船の通行が制限されており、世界の海運に深刻な結果をもたらしている。

The Panama Canal is the (ア) maritime shortcut between the Pacific and Atlantic oceans. Gatun Lake, the main water source for the Panama Canal's lock system, (イ) on rainwater, but severe (ウ) drought has (エ) its water level to fall. As a result, ship traffic through the canal has been (オ) with severe consequences for global shipping.

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| 1. caused | 2. interrupted | 3. relies |
| 4. repeated | 5. restricted | 6. retreated |
| 7. trusts | 8. vital | 9. vivid |

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9.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 山口県の造船会社で新しい捕鯨母船が竣工し、捕鯨会社に引き渡された。同船は73年ぶりに新造された世界で唯一の捕鯨母船で、日本の捕鯨船団の中核を担うことになる。その船型は従来の捕鯨母船とは全く異なっている。それは自動車を運ぶRORO船のような見た目で、探鯨用大型高性能ドローン用のデッキが設けてある。

A new whaling mother ship has been completed at a shipbuilder in Yamaguchi Prefecture and (ア) to a whaling company. The ship is the world's only newly (イ) whaling mother ship, the first in 73 years, and will serve as the (ウ) of the Japanese whaling fleet. The ship's shape is quite different from (エ) whaling mother ships. It looks like a RORO ship for the (オ) of cars, and has a deck for a large, high-performance whale-searching drone.

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|-----------------|-----------------|--------------|
| 1. ancient | 2. axis | 3. built |
| 4. conventional | 5. core | 6. delivered |
| 7. proceeded | 8. transmission | 9. transport |

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9.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 各船舶は、海上にある間、MSI(海上安全情報)及び捜索・救難に関連する情報の放送を、当該情報が当該船舶の航行する海域に向けて放送される適切な周波数を用いて、無線聴守を維持し続けなくてはならない。

Every ship, while (ア), shall (イ) a radio (ウ) for broadcasts of MSI (maritime safety information) and search and rescue related information on the (エ) frequency or frequencies on which such information is broadcast for the area in which the ship is (オ).

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|---------------|----------------|-------------|
| 1. appreciate | 2. appropriate | 3. at sea |
| 4. floating | 5. listen | 6. maintain |
| 7. navigating | 8. stay | 9. watch |