

XRA 309
YRA 309
ZRA 309

第一級海上無線通信士
第二級海上無線通信士
第三級海上無線通信士

「英語」試験問題

5問 1時間30分

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。

Oceans cover nearly three-quarters of the Earth, and it's getting crowded out on the water. Energy, shipping, fishing and conservation groups all need space to operate on the world's oceans, and are bumping up against each other more frequently. All agree the competition is going to increase in coming years.

Bethann Rooney, a deputy director with the Port Authority of New York and New Jersey, predicted that the combined port of New York and Newark, New Jersey, second in size only to Los Angeles, will see its cargo volume double or triple over the next 30 years. "I cannot overstate the importance of collaboration to ensure an ocean for all," she said. "How do we coordinate and ensure everyone can operate in a confined space? Our ships are getting larger and larger every day."

Clinton Plummer, an official of an offshore wind power generation company, said his company had to navigate 26 government approvals to build its wind farm off the coast of Block Island in Rhode Island, currently the only functioning U.S. wind farm. As it moves forward with other projects off Massachusetts, New Jersey and Delaware, it will need dozens more government approvals, in addition to interacting and planning with fishing and shipping companies, marine conservationists, and onshore communities. The Boston to Washington corridor on the U.S. East Coast holds 20% of the nation's population, and is among the most promising wind-power markets in the world; Plummer called it "the Saudi Arabia of wind." But commercial and recreational fishing interests complain they need more of a say in advance planning as wind energy projects are considered. Fishermen insisted last month to a congressional subcommittee looking at offshore wind energy that they be consulted when crucial decisions are being made on the development of such projects, including where they are located and the level of access to the waters near them. "To pull this off, we have to work very closely with the stakeholders," Plummer said Tuesday.

Bradley Campbell, president of the New England-based Conservation Law Foundation, and New Jersey's former environmental protection commissioner, said shipping lanes that were altered to protect endangered North Atlantic right whales need to be changed again now that the animals are migrating, due in part to warming oceans. Only about 400 of those whales now exist, he said. He said countries including the U.S. need to designate more protected marine areas where commercially valuable species can be permitted to breed to sustainable levels.

<注> overstate 誇張する stakeholder 利害関係者 right whale セミクジラ

(設問)

A-1 What do energy, shipping, fishing and conservation groups acknowledge about the space they operate on the world's oceans?

1. The groups need not talk among themselves more frequently.
2. The competition among the groups will escalate in coming years.
3. The groups should be bumping up against each other more and more.

A-2 According to the article, which of the following is correct about the relative sizes of the port of Los Angeles and the combined port of New York and Newark?

1. The combined port of New York and Newark is larger than the port of Los Angeles.
2. The port of Los Angeles is almost the same size as the combined port of New York and Newark.
3. The combined port of New York and Newark is the second largest next to the port of Los Angeles.

A-3 What, according to the official of an offshore wind power generation company, will be needed to proceed with the wind farm projects off Massachusetts, New Jersey and Delaware?

1. The same 26 government approvals as for the only currently functioning U.S. wind farm
2. Dozens more government approvals in addition to coordinating activities with ocean stakeholders
3. Less discussion among fishing and shipping companies, marine conservationists, and onshore communities

A-4 What is the characteristic of the area Clinton Plummer calls "the Saudi Arabia of wind"?

1. It looks like a corridor in Saudi Arabia.
2. Strong winds blow constantly in the area just like in Saudi Arabia.
3. It is one of the most hopeful wind-power markets in the world.

A-5 What does Bradley Campbell insist about the North Atlantic right whales?

1. The shipping lanes should be altered again to protect the right whales.
2. Other countries besides the U.S. need to designate more protected marine areas.
3. The areas where commercially valuable species can be permitted should be confined more strictly.

(XRA, YRA, ZRA 309 - 1)

2. 次の英文A-6からA-9までは、海上移動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 Coast stations and ship stations with narrow-band direct-printing (NBDP) equipment shall set watch on the NBDP frequency associated with the distress alert if it indicates that NBDP is to be used for subsequent distress communications. If practicable, they should additionally set watch on the radiotelephone frequency associated with the distress alert frequency.

(設問) What must coast stations and ship stations with NBDP equipment do when they receive a distress alert which specifies NBDP for the subsequent distress communication?

1. Those coast stations and ship stations must start radio watch on the associated NBDP frequency and, if practically possible, the associated radiotelephony frequency should also be watched.
2. Those coast stations and ship stations must acknowledge the distress alert using NBDP equipment on the associated NBDP frequency. Additional acknowledgement using radiotelephony is advisable.
3. Those coast stations and ship stations must immediately set watch on the radiotelephony frequency associated with the distress alert and, if practicable, on the associated NBDP frequency as well.

A-7 Ship stations in receipt of a distress call sent by radiotelephony on the frequency 156.8 MHz (VHF channel 16) shall, if the call is not acknowledged by a coast station or another vessel within five minutes, acknowledge receipt to the vessel in distress and use any means available to relay the distress call to an appropriate coast station or coast earth station.

(設問) What should a ship station receiving a distress call sent by radiotelephony on the frequency 156.8 MHz (VHF channel 16) do?

1. Upon receiving a distress call, a ship station must send an acknowledgement to the vessel in distress at once.
2. A ship station receiving such a distress call must send an acknowledgement to the distressed vessel within five minutes before taking further action.
3. In the absence of acknowledgement by a coast station or another vessel within five minutes, the ship station must acknowledge the receipt and use any means possible to communicate the distress call to a suitable coast station or coast earth station.

A-8 International telecommunication services must give absolute priority to all telecommunications concerning safety of life at sea, on land, in the air or in outer space, as well as to epidemiological telecommunications of exceptional urgency of the World Health Organization (WHO).

<注> epidemiological 疫学上の

(設問) According to the above article which of the following describes correctly the telecommunications category with the absolute priority?

1. Telecommunications related to the safety of life
2. Telecommunications related to the punctuality of vessels' navigation
3. Telecommunications performed by any of the UN's specialized agencies such as the WHO

A-9 Every radio installation shall be provided with reliable, permanently arranged electrical lighting, independent of the main and emergency sources of electrical power, for the adequate illumination of the radio controls for operating the radio installation.

(設問) What are the requirements for the illumination of all radio installations?

1. The illumination of the radio controls should be adequate and permanently connected to the main electrical power supply.
2. The radio controls should be illuminated by an electrical power supply that is separate from the main and emergency power supplies.
3. The radio controls must be reliable and permanently connected to both the main and emergency electrical power supplies.

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 科学者は、6G通信などの最先端の通信システムを使用してCubeSat超小型衛星で使用するための新しいアンテナのデザインを明らかにした。研究者は、折り紙理論、機械的ダイナミクス、アンテナアレイの原理に基づく理論的知識を使用して、CubeSat用の小型で軽量の再構成可能なアンテナを作った。これは、もしかすると衛星通信の新時代の始まりを示すことになるかもしれない。

Scientists have revealed a (ア) antenna design (イ) in CubeSat nanosatellites using state-of-the-art communications systems like 6G communications. Using (ウ) knowledge based on origami theory, mechanical dynamics, and antenna array (エ), the researchers built a small, lightweight, and reconfigurable antenna for CubeSat. This could potentially mark the beginning of a new (オ) in satellite communications.

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|--------------|-----------------|------------|---------------|
| 1. century | 2. era | 3. for use | 4. logical |
| 5. made | 6. novel | 7. origins | 8. principles |
| 9. universal | 10. theoretical | | |

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 科学者はヒマワリの花粉で作られた再利用可能な生分解性スポンジを作成した。それは汚染された水から油やその他の有機溶剤を容易に吸収できる。これは海洋の油流出に取り組むための有望な代替手段になるだろう。実験室での実験で、科学者は、そのスポンジの能力がガソリンやモーターオイルなどの油汚染物質を市販の油吸収剤に匹敵する割合で吸収することを示した。

Scientists have created a reusable, biodegradable sponge made of sunflower pollen. It can readily soak up oil and other (ア) solvents from (イ) water. This will be a promising (ウ) for tackling marine oil spills. In lab experiments, the scientists showed the sponge's ability to (エ) oil contaminants, such as gasoline and motor oil, at a rate (オ) to that of commercial oil absorbents.

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|------------|----------------|---------------|-----------------|
| 1. absorb | 2. alternative | 3. comparable | 4. contaminated |
| 5. mineral | 6. muddy | 7. organic | 8. pour |
| 9. replace | 10. superior | | |

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 主管庁が認めるところにより、かつ、無線通信規則に要求されるところにより、無線通信業務に関連するすべての事件であって海上における人命の安全にとって重要であると認められるものについての記録は維持されなければならない。

A (ア) shall be kept, to the satisfaction of the Administration and as (イ) by the Radio Regulations, of all (ウ) connected (エ) the radiocommunication service which appear to be (オ) to safety of life at sea.

- | | | | |
|--------------|------------------|--------------|------------------|
| 1. actions | 2. between | 3. condition | 4. in particular |
| 5. incidents | 6. of importance | 7. pursued | 8. record |
| 9. required | 10. with | | |