XRA 503　　第一級海上無線通信士
YRA 503　　第二級海上無線通信士　　「英語」試験問題
ZRA 503　　第三級海上無線通信士

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 world's ocean freight shipping companies recently called on international maritime authorities to exclude pollution that their vessels spew in bad weather from new regulations, a condition that would apply almost a third of the time in the Atlantic. But the effort failed Friday. Under international laws due to come into force in 2023, all big vessels will be rated from A to E by how much carbon dioxide flows from their stacks for every mile traveled and ton carried. The idea is to incentivize owners to install cleaner technologies. Although the proposed rules are currently toothless, nation states might bring in penalties for high-polluting ships in the future.

In April, four trade groups, including the World Shipping Council, complained that the new rules would penalize ships that have to sail in rough conditions. This burns more fuel and produces more carbon dioxide, meaning ships in windy seas would get a worse carbon efficiency rating. So the trade groups proposed to the International Maritime Organization (IMO) in written submissions that periods of eight hours or more undertaken in bad weather be struck from the scoring entirely. They defined bad weather as wind speeds of 28 knots or waves of four meters high.

"It would pretend that ships hardly ever sail in stormy weather and only calculate the carbon intensity of the ship under the most favorable conditions," said Bryan Comer, who heads up the marine program as a senior researcher at the International Council of Clean Transportation (ICCT). The International Maritime Organization, made up of member countries, has now rejected that idea. Going slow is one of the best ways to reduce emissions. If they had won the exemption, ships could have gone as fast as they wanted in bad weather, Comer said, burning more fuel than usual without it showing up in their ratings. This might enable them to hit tougher deadlines and win contracts. "There is actually an incentive if this had gone forward to sail in adverse weather," said Comer.

According to the World Shipping Council, waves exceed four meters in the North Atlantic more than 30% of the time. The World Shipping Council argued that factors like extreme weather "distort the picture and make the numbers less effective at driving the change we want." The trade group conceded it was "logical at first glance" that the proposal might incentivize ships to sail into heavy weather, but said the high cost of fuel made this very unlikely. It pointed out sailing in rough seas can use 30% more fuel than in calmer weather, thus saddling ships with a worse rating.

＜注＞ spew　吐き出す　　incentivize　動機づけをする　　toothless　実効性がない　　penalize　不利にする

（設問）

A−1　What government penalties are being enforced for ships which ignore the new regulations?
1. Ships will have their A to E rating downgraded.
2. At the moment, none in particular has been imposed.
3. Nation states have already decided on their own separate punishments.

A−2　What definition did the shipping trade groups propose for bad weather?
1. Any weather that reduces carbon efficiency ratings
2. Four-meter-high waves, or wind speeds of 28 knots
3. Eight hours or more of high waves, with low wind speeds

A−3　What does the above article say about ways to reduce carbon emissions from maritime transportation?
1. Reducing the operational speed of sailing is one of the best ways.
2. Increasing speed is more fuel-efficient because the journey is quicker.
3. It is better to travel only in rough weather so that the carbon dioxide can be easily absorbed by the sea.

A−4　According to the ICCT researcher, what would have happened if the trade groups' proposal had been accepted?
1. Ships would have gone faster in difficult conditions.
2. Less fuel would have been burned in ship operation.
3. Ships would have purposefully avoided sailing in bad weather.

A−5　Which of the following is the trade group's view in relation to sailing in challenging weather conditions?
1. Less fuel is required in rough weather because the wind propels the ship.
2. Bryan Comer's statement regarding the incentive to sail in adverse weather is logical, and should be heeded.
3. Sailing in heavy weather uses more fuel and therefore ships would refrain from making such voyages.

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 When distress traffic has ceased on frequencies which have been used for distress traffic, the station controlling the search and rescue operation shall initiate a message for transmission on these frequencies indicating that distress traffic has finished.

（設問） What should a station in control of a search and rescue operation do when the distress traffic has ceased?

1. Wait for any final messages to come in, in case of any further emergencies
2. Remain alert and ready to deal with new situations arising on the same frequency
3. Send out a message on the frequencies concerned to indicate the distress traffic has finished

A−7 Every ship shall be provided with a VHF radio installation capable of transmitting and receiving DSC (Digital Selective Calling) on the frequency 156.525 MHz (channel 70). It shall be possible to initiate the transmission of distress alerts on channel 70 from the position from which the ship is normally navigated.

（設問） From where must ships be able to make channel 70 distress alert transmissions?

1. The place where the VHF antenna is installed
2. The place from which the ship is normally steered
3. Distress alerts should not be issued from anywhere on channel 70.

A−8 On receiving a distress alert, the radio operator on watch should alert the master and, if appropriate, the radio operator designated as having primary responsibility for radiocommunications during distress incidents.

（設問） According to the above guidance, who should alert the master that a distress alert has been received?

1. The master should be alerted by any crew member of the ship.
2. In the first instance, the duty radio operator should alert the master.
3. The radio operator who has responsibility during distress incidents should alert the master.

A−9 When a master has reported a tropical cyclone or other dangerous storm, it is desirable but not obligatory that further observations be made and transmitted hourly, if practicable, but in any case at intervals of not more than 3 hours, so long as the ship remains under the influence of the storm.

（設問） After having reported a cyclone or other dangerous storm, what is it desirable for the master of the ship to do while the ship is under the influence of the storm?

1. There is no obligation or guidance, and the master should judge the situation accordingly.
2. In bad weather, it is unlikely that the master will have the time to send any reports until the storm has passed.
3. Report by radio at least every three hours and more frequently if circumstances allow.

3. 次の設問**B−1**の日本文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 アンモニアは貨物船の脱炭素化に極めて重要な役割を果たすことが期待されている。この無色の燃料は二酸化炭素を排出しない。豊富にあり、ありふれたもので、再生可能な電気、水、空気を使って作ることができる。燃料電池と内燃機関の両方でそれを使用することができる。水素とは異なり、高圧タンクや極低温ジュワー瓶で貯蔵される必要はない。しかもリチウムイオン電池の10倍のエネルギー密度がある。

Ammonia is expected to play a (ア) role in decarbonizing cargo ships. This colorless fuel emits (イ) carbon dioxide. It is (ウ) and common and can be made using renewable electricity, water, and air. Both fuel cells and internal combustion engines can use it. Unlike (エ), it doesn't have to be (オ) in high-pressure tanks or cryogenic dewar vessels. And it has 10 times the energy density of a lithium-ion battery.

1. abandon	2. abundant	3. conservative	4. critic
5. crucial	6. hydrant	7. hydrogen	8. negative
9. no	10. stored		

4. 次の設問**B−2**の日本文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 バルバスバウには、喫水線のすぐ下に突き出た球状部分がある。この球状部分は、船体の周りの水の流れ方を変更し、抗力を減らし、速度、航続距離、燃料効率及び安定性を向上させる。その球状部分の主な目的は、船体によって生成される波を打ち消すために、船体によって生成されていく波の前方に波を生成することである。

A bulbous bow has a protruding bulb just below the (ア). This bulb (イ) the way the water flows around the hull, reducing drag and thus increasing speed, range, fuel (ウ), and (エ). The bulb's primary aim is to generate a wave forward of the waves being generated by the hull in order to (オ) the waves generated by the hull.

1. cancel out	2. deny	3. efficiency	4. modifies
5. modifying	6. ratio	7. security	8. stability
9. waterline	10. watermark		

5. 次の設問**B−3**の日本文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 無線当直の任務を遂行する無線担当者は、無線通信規則及びSOLAS条約で明記された周波数で当直の維持を確実にしなければならない。また、任務の遂行中、無線機器及び電源の動作状況を定期的に点検し、かつ、その機器について気づいたどんな故障についても船長に報告しなければならない。

The radio operator performing radio (ア) duties shall (イ) that watch is (ウ) on the frequencies specified in the Radio Regulations and the SOLAS Convention and, while on duty, regularly check the operation of the radio equipment and its (エ) of energy and report to the master any observed (オ) of this equipment.

1. ensure	2. failure	3. maintained	4. mistake
5. origin	6. responsive	7. sources	8. strengthen
9. supported	10. watchkeeping		