XRA 403　　第一級海上無線通信士
YRA 403　　第二級海上無線通信士　　「英語」試験問題
ZRA 403　　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。

California officials will again truck millions of young salmon raised at fish hatcheries in the state's Central Valley agricultural region to the Pacific Ocean because projected river conditions show that the waterways the fish use to travel downstream will be historically low and warm due to increasing drought. Officials announced the massive trucking operation on Wednesday, saying the effort is aimed at ensuring "the highest level of survival for the young salmon on their hazardous journey to the Pacific Ocean."

"Trucking young salmon to downstream release sites has proven to be one of the best ways to increase survival to the ocean during dry conditions," Jason Julienne, North Central Region Hatchery Supervisor, said in a statement. California is now in its second year of drought after a winter with little precipitation and it's the state's fourth-driest year on record, especially in the northern two-thirds of the state, according to the California Department of Water Resources. Illustrating the state's risk of drought, record low reservoir levels led Gov. Gavin Newsom last week to proclaim a regional drought emergency for the Russian River watershed in Sonoma and Mendocino counties.

More than 16.8 million young salmon from four Central Valley hatcheries will be trucked to coastal sites around the San Pablo, San Francisco, Half Moon and Monterey bays. Getting the fish transported means taking about 146 truckloads to the Pacific Ocean from four state hatcheries and federal officials will do the same from one hatchery, a local newspaper reported. California's iconic native Chinook salmon need cold water to survive but dams have blocked their historic retreats to the chilly upper reaches of Northern California's Sacramento River tributaries. The fishing industry and Central Valley farmers are in a constant struggle over the same river water to sustain their livelihoods, with fish supporters lobbying for higher river water levels and farmers against it so that so they can draw water to irrigate crops.

John McManus, president of the Golden State Salmon Association, which advocates for fishers, told the newspaper he appreciates the extra effort to save the fall-run Chinook amid the drought. But he said the underlying problem for salmon is that state and federal water officials have allowed too much water to be pulled from rivers and creeks for agricultural irrigation. "These river conditions are made worse by decisions that put salmon last," he told the newspaper.

＜注＞ hatchery 孵化場(ふか)　downstream 下流に(下流の)　watershed 流域　tributary 支流　irrigate 灌漑(かんがい)する

(設問)

A−1　What is the plan to help millions of young salmon reach the Pacific Ocean?
1. They will travel downstream via by-pass waterways as the Sacramento River is blocked by dams.
2. They will travel to the Pacific Ocean via waterways with the water augmented by the local government.
3. They will be transported by artificial means to release sites due to insufficient and excessively warm water in the rivers.

A−2　Why is California experiencing drought?
1. Because water levels in reservoirs are sufficient.
2. Because there was little winter rain or snow.
3. Because salmon need the water to reach the Pacific.

A−3　Why are dams a problem?
1. Because they don't cool the water that the salmon need to breed.
2. Because the fishing industry finds it too easy to catch salmon.
3. Because salmon can't reach the cold waters they need.

A−4　According to the article, which of these is NOT true?
1. Farmers insist on keeping river water levels high and fishers appreciate that.
2. Farmers and fishermen are in conflict over who can use the waters.
3. The most suitable water temperature for native Chinook salmon is found in the areas far from the sea.

A−5　What is John McManus grateful for?
1. The operation to save autumn-run Chinook salmon
2. The extensive efforts of California officials to address the general issues facing salmon for the future
3. The decisions that state and federal water officials made previously on behalf of salmon

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 the appropriate coast earth stations in receipt of distress alerts or distress calls shall ensure that they are routed as soon as possible to a rescue coordination center. In addition, receipt of a distress alert or a distress call is to be acknowledged as soon as possible by a coast station, or by a rescue coordination center via a coast station or an appropriate coast earth station.

（設問） What should a rescue coordination center do when it has received distress alerts or distress calls?

1. Acknowledge them as quickly as possible via a coast or an appropriate coast earth station
2. Accept the signal immediately and notify the nearest coast earth station of the station in distress
3. Wait until the vessel in distress contacts an appropriate coast station which can take direct action

A−7 Administrations shall take all practicable steps necessary to ensure that the operation of any electrical or electronic apparatus installed in ship stations does not cause harmful interference to the essential radio services of stations which are operating in accordance with the provisions of the Radio Regulations.

（設問） According to the above regulation, what should administrations do to ensure essential radio services of ship stations suffer no interference?

1. Force ship stations to install electrical or electronic apparatus that boosts the signals of essential radio services
2. Ensure that no electrical or electronic devices other than those used for the essential services are installed in any ship stations
3. Make sure that no electrical or electronic devices in the station cause any harmful interference to the essential radio services

A−8 Every ship, while at sea, shall maintain a radio watch for broadcasts of maritime safety information on the appropriate frequency or frequencies on which such information is broadcast for the area in which the ship is navigating.

（設問） What should ships at sea do to receive maritime safety information?

1. Keep a manual watch on as many frequencies of radio broadcasting stations as possible at all times
2. Ensure that the radio apparatus is tuned to the frequency or frequencies on which the information is being broadcast for the area in question
3. Broadcast maritime safety information on the frequency or frequencies on which other ship stations may keep radio watch

A−9 Batteries providing a source of energy for any part of the radio installation, including those associated with uninterrupted power supplies, are the responsibility of the radio operator designated as having primary responsibility for radiocommunications during distress incidents.

（設問） Who has responsibility for the batteries of all parts of the radio installation?

1. The radio operator who has the primary responsibility for cleaning the engine room at all times
2. The owner of the vessel who designates the primary radio operator responsible for distress communications
3. The radio operator who is designated as the primary operator responsible for distress communications

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　皇帝ペンギンのライフサイクルは、繁殖、摂食、換羽するのに必要とされる、安定した海氷の存在と結び付けられる。ある科学誌に発表された研究によると、現在の炭素排出量と気候変動の速度に変更がなければ、2100年までに皇帝ペンギンのコロニーの98%が絶滅の瀬戸際に追いやられる可能性がある。

＜注＞　コロニー：同種の生物の集団

The lifecycle of emperor penguins is tied to the existence of (　ア　) sea ice, which they need in order to (　イ　), feed and molt. Research reported in a science journal has found that (　ウ　) 2100, 98% of emperor penguin colonies may be pushed to the brink of extinction if no changes (　エ　) to current rates of carbon (　オ　) and climate change.

1. are made	2. breed	3. by	4. emissions
5. fixed	6. has made	7. grow	8. omissions
9. stable	10. until		

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　人工知能をよりスマートにするには、まず動物界で最も単純な生き物のひとつであるウミウシと同じくらいインテリジェントである必要がある。新しい研究では、ある素材がウミウシの最も重要な知性に関連した特徴を模倣できることがわかった。この発見は、自動運転化される自動車や手術ロボットに至るまで、AIがより効率的かつ信頼性の高いものになるのを助けるかもしれないハードウェアの作成への一歩である。

For artificial intelligence to get any smarter, it needs first to be as intelligent as one of the simplest (　ア　) in the animal kingdom: the sea slug. A new study has found that a new material can (　イ　) the sea slug's most essential intelligence-related (　ウ　). The discovery is a step towards building hardware that could help make AI more (　エ　) and reliable for technology (　オ　) from self-driving cars to surgical robots.

1. creatures	2. efficient	3. features	4. following
5. imitate	6. livings	7. ranging	8. repeat
9. samples	10. sufficient		

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　船長もしくは船舶等の責任者は、無線電報の文もしくは単にその存在、又は無線通信業務によって得られる何らかの情報を知り得るすべての者と同様に、通信の秘密を遵守し確保する義務を負う。

The master or the person responsible for vessels, as (　ア　) as all persons who may have knowledge of the text or even of the existence of a radiotelegram, or of any information whatever obtained by (　イ　) of the radiocommunication service, are (　ウ　) under the (　エ　) of observing and ensuring the (　オ　) of correspondence.

1. claim	2. good	3. located	4. means
5. meantime	6. obligation	7. placed	8. secrecy
9. secretary	10. well		