

第一級総合無線通信士「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。

Invasive species are plants and animals that thrive in areas where they don't naturally live. Such species are usually brought there by humans, either accidentally or intentionally. Sometimes, with no natural predators, they multiply and take over, crowding out and at times killing native species. Now, new technology is being combined with the old methods — weed pulling, trapping and pesticides. Finding new weapons is crucial because invasive species are costly — \$314 billion per year in damages in just the United States, the United Kingdom, Australia, South Africa, India and Brazil. It is also one of the leading causes of extinction on islands such as Guam, according to Piero Genovesi, an Italian scientist who chairs the invasive species task force for an international organization.

A new underwater robot is targeting the dangerous lionfish, which has spread over the Caribbean, the Gulf of Mexico and up the US East Coast as far north as New York's Long Island with its venomous spines that are dangerous to touch. With no natural predators in the Atlantic, the voracious aquarium fish devours large amounts of other fish, including key commercial fish species such as snapper and grouper.

The robot is the creation of Colin Angle, chief executive officer of an American robotics company. Along with his wife, Erika, and colleagues, he created a new nonprofit organization to turn automation into an environmental tool. The robot, called Guardian LF1, uses a gentle shock to immobilize the lionfish before they are sucked alive into a tube. In its first public outing, the robot caught 15 lionfish during two days of testing in Bermuda. Top chefs competed in a cook-off of the captured lionfish. Lionfish go for nearly \$10 a pound (454 grams), and Angle is hoping to get the price of the robot down from tens of thousands of dollars to about \$500.

US Fish and Wildlife officials are using souped-up old technology to catch Asian carp, a fish that has taken over rivers and lakes in the Midwest. They use a specialized boat — the Magna Carpa — with giant winglike nets that essentially uses electric current as an underwater stun gun to shock the fish. At higher doses, the fish are killed and float to the surface. In just five minutes, they can collect 500 fish, and later turn them into fertilizer. Electro-fishing was written about as a possible conservation technique back in 1933, said biologist Wyatt Doyle.

<注> pesticide 殺虫剤 venomous spine 有毒な棘 voracious 大食の devour がつがつ食う
snapper フエダイ grouper ハタ cook-off 料理コンテスト souped-up 性能を上げた

(設問)

A-1 According to the article, what are invasive species?

1. These are plants or animals that are only able to survive in their natural environment.
2. These are plants or animals that live in areas where humans are present, either accidentally or intentionally.
3. These are plants or animals that have moved into areas in which they do not naturally live, in some cases threatening the local species.

A-2 What strategies are there for tackling the problems of invasive species at present?

1. New tools are necessary to replace the old methods.
2. The older methods are the only reliable way of dealing with these problems.
3. A combination of old methods and new technology seems to be the best approach.

A-3 What does the article say about the lionfish?

1. It is a beautiful aquarium fish that is being eaten by commercial fish such as snapper and grouper.
2. The population of this fish has increased as it has moved into areas where no other creatures attack or kill it.
3. Lionfish are dangerous fish that are native to the Atlantic Ocean in the area around New York's Long Island.

A-4 Which of the following is a goal of Colin Angle, chief executive officer of the robotics company?

1. He is encouraging top chefs to stop using lionfish in their fish dishes.
2. His ambition is to increase the price of lionfish to make fishing of this species more profitable.
3. His aim is to reduce the price of the Guardian LF1 robot to a level where it is more affordable for users.

A-5 What kind of technology are US Fish and Wildlife officials using to catch Asian carp?

1. Officials are using technology that was first used for conservation in 1933.
2. They are using electricity to shock or kill large numbers of fish in a short time.
3. They are using boats with giant winglike nets that pour fertilizer onto the surface of the water.

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 No provision of these Regulations prevents the use by a mobile station or a mobile earth station in distress of any means at its disposal to attract attention, make known its position, or obtain help.

(設問) What restrictions are imposed by the Regulations on a mobile station or a mobile earth station in distress regarding how it tries to attract attention, make known its position, or obtain help?

1. According to the Regulations, in cases of distress there are no such restrictions on stations in need of assistance.
2. A station in distress must be aware of the provisions in the Regulations before attempting to attract attention, make known its position, or obtain help.
3. The Regulations prevent a mobile station or a mobile earth station from using any means of attracting attention, making known its position, or obtaining help.

A-7 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 is required of every ship while at sea?

1. All ships must transmit weather information about the area in which they are navigating.
2. All ships at sea are required to broadcast regular safety information on a selected frequency.
3. All ships are required to monitor the appropriate frequencies for the relevant safety information while at sea.

A-8 In deciding the arrangements for the radio watch, the master of every seagoing ship shall ensure that the primary duties for radio watchkeeping are not adversely affected by attending to radio traffic not relevant to the safe movement of the ship and safety of navigation, and take into account the radio equipment fitted on board and its operational status.

(設問) What does the master of a seagoing ship need to take into account when deciding the arrangements for the radio watch?

1. The decision should be based on the equipment to be brought in at the next port of call.
2. When making such decisions, safety must always be the top priority for the master of a ship.
3. The master of a ship must take into account the effects of radio traffic in the area of navigation.

A-9 As the aeronautical station operator generally guards more than one frequency, the call from the aircraft station should be followed by an indication of the frequency used, unless other suitable means of identifying the frequency are known to exist.

(設問) Why should the frequency used be indicated after the call?

1. An aeronautical station operator must indicate the frequency even when other means of identification exist.
2. This indication is recommended because the operator often guards more than a single frequency.
3. Indication of the frequency used is necessary because no other means of identifying the frequency are suitable.

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 日本は3機の準天頂衛星を含む4衛星とアメリカのGPS衛星数機による独自の航行支援サービスを、2018会計年度から開始する予定である。仰角が高い準天頂衛星は、低仰角の衛星からの信号であれば遮られたり、マルチパスの影響を受けたりする高いビルや山に囲まれた場所においても位置計算をかなりしっかりと支援する。

Japan plans to start providing its own satellite (ア) services using four Japanese satellites, three (イ) are quasi-zenith, and several US GPS satellites in (ウ) 2018. Quasi-zenith satellites at higher elevation angles will provide considerable assistance in position calculations even for locations (エ) by tall buildings or mountains where the signals from low elevation satellites are blocked or (オ) by multi-path effects.

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|----------------------|-------------|------------------|---------------|
| 1. affected | 2. beloved | 3. calendar year | 4. fiscal |
| 5. navigational | 6. occupied | 7. of which | 8. surrounded |
| 9. telecommunication | 10. where | | |

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 地質学会ジャーナルに掲載された論文は、かつて Gondwana 超大陸の一部であり約7,500万年前に分裂したオーストラリア東の海底の巨大な陸塊であるジーランディアは、新大陸として考えられるべきであり、更なる調査が必要であると言っている。研究用掘削船は、現在ジーランディアの沈殿物サンプルを採取している。

A paper published in a geological society's journal says that Zealandia, a huge underwater landmass east (ア) Australia which was once part of the Gondwana supercontinent but broke (イ) some 75 million years ago, should be (ウ) as a new continent and needs to be (エ) further. A research drilling vessel is now collecting (オ) samples from Zealandia.

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|-------------|---------------|-----------------|-----------------|
| 1. away | 2. considered | 3. down | 4. experimented |
| 5. floating | 6. in | 7. investigated | 8. mistaken |
| 9. of | 10. sediment | | |

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 管轄するATS機関からの特段の定めがない場合、飛行計画が提出されているいかなる飛行についても、直接又は無線電話又はデータリンクを用いる方法により、到着飛行場の適切な航空交通業務ユニットに対して、着陸後、可能な限り早い時点で到着の報告がなされなくてはならない。

Unless otherwise prescribed by the appropriate ATS authority, a report of arrival shall be made (ア), by radiotelephony or (イ) data link at the earliest possible moment after landing, to the appropriate air traffic services unit at the arrival (ウ), by any flight (エ) which a flight plan has been (オ).

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|--------------|-------------|-----------|--------------|
| 1. aerodrome | 2. alone | 3. at | 4. for |
| 5. in person | 6. rejected | 7. runway | 8. submitted |
| 9. versus | 10. via | | |