

第二級総合無線通信士「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。

A U.S.-French satellite that will map almost all of the world's oceans, lakes and rivers rocketed into orbit Friday. The predawn launch aboard a SpaceX rocket from Vandenberg Space Force Base in California capped a highly successful year for NASA. Nicknamed SWOT — short for Surface Water and Ocean Topography — the satellite is needed more than ever as climate change worsens droughts, flooding and coastal erosion, according to scientists. Cheers erupted at control centers in California and France as the spacecraft started its mission. "It is a pivotal moment, and I'm very excited about it," said NASA program scientist Nadya Vinogradova-Shiffer. "We're going to see Earth's water like we've never before."

About the size of an SUV, the satellite will measure the height of water on more than 90% of Earth's surface, allowing scientists to track the flow and identify potential high-risk areas. It will also survey millions of lakes as well as 2.1 million kilometers of rivers. The satellite will shoot radar pulses at Earth, with the signals bouncing back to be received by a pair of antennas, one on each end of a 10-meter boom. It should be able to make out currents and eddies less than 21 kilometers across, as well as areas of the ocean where waters of varying temperatures merge. NASA's current fleet of nearly 30 Earth-observing satellites cannot make out such slight features. And while these older satellites can map the extent of lakes and rivers, their measurements are not as detailed, said the University of North Carolina's Tamlin Pavelesky, who is part of the mission. Perhaps most importantly, the satellite will reveal the location and speed of rising sea levels and the shift of coastlines, key to saving lives and property. It will cover the globe between the Arctic and Antarctic at least once every three weeks, as it orbits more than 890 kilometers high. The mission is expected to last three years.

<注> topography 地形学 worsen 悪化させる drought 干ばつ erosion 浸食 erupt 爆発する
pivotal 重要な SUV スポーツ用多目的車 eddy 渦 merge 溶け込む Antarctic 南極

(設問)

A-1 When was the satellite launched?

1. Just before sunrise
2. Just before noon
3. Just before sunset

A-2 According to scientists, such satellites are needed more than ever. Why are they so needed?

1. Due to the lack of water, it is becoming more important to find underground water systems.
2. They are needed to facilitate the cooperation between space industries of the United States and France.
3. Water measurements have become more important because droughts, flooding and coastal erosion are being worsened by global warming.

A-3 Why was the start of the SWOT satellite's mission a pivotal moment according to the NASA scientist?

1. The satellite directly measures the temperatures of various sites on Earth's surface.
2. The satellite shows the distribution of underground water on Earth using a new technology.
3. The satellite provides images of Earth's waters that are more detailed than those provided previously.

A-4 Which of the following describes the satellite correctly?

1. It can measure the elevations of water surfaces to track water flows.
2. The satellite cannot identify eddies of less than 21 kilometers in diameter.
3. It has antennas as large as 10 meters in diameter to receive signals from Earth.

A-5 According to the article, what is the SWOT satellite's most important role?

1. Detailed data collection to build maps of newly found rivers and lakes
2. To provide vital information on the location and speed of rising sea levels and shifting coastlines
3. To provide vital data for search and rescue operations by observing 90% of Earth's surface between the Arctic and Antarctic

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 Changes of frequency in the sending and receiving apparatus of any ship station shall be capable of being made as rapidly as possible.

(設問) What capability does the above regulation require the transmitter and receiver of a ship station?

1. Change sending and receiving frequencies without causing any electrical trouble
2. Change the sending frequency as well as the receiving frequency very quickly
3. Change sending to receiving mode on the same frequency band as rapidly as possible

A-7 Every ship shall be provided with a receiver capable of receiving international NAVTEX service broadcasts if the ship is engaged on voyages in any area in which an international NAVTEX service is provided.

(設問) Which ships shall be provided with the receiver for the international NAVTEX service?

1. All ships installed with a transmitter for the international NAVTEX service
2. All ships in sea areas in which an international NAVTEX service is available
3. All ships, including those in sea areas where no NAVTEX service is offered

A-8 Continuous watch means that the radio watch concerned shall not be interrupted other than for brief intervals when the ship's receiving capability is impaired or blocked by its own communications or when the facilities are under periodical maintenance or checks.

(設問) How should the radio operator perform the continuous watch as defined above?

1. The radio operator doesn't need to maintain the watch if there are many other things to do.
2. The radio operator should not stop watching even when the receiving capability is impaired or blocked by the ship's own communications or for periodical maintenance or checks.
3. The radio operator should not stop the watch except during short periods when the receiving capability is impaired or blocked by the ship's own communications or for periodical maintenance or checks.

A-9 Aircraft shall continuously guard the VHF emergency frequency 121.5 MHz in areas or over routes where the possibility of interception of aircraft or other hazardous situations exist, and a requirement has been established by the appropriate authority.

(設問) What is an aircraft required to do with the VHF emergency frequency 121.5MHz when it is flying in or over a hazard and such a requirement has been imposed by the appropriate authority?

1. The aircraft must prevent other radio stations from using this emergency frequency.
2. All aircraft need to inform the appropriate authority using the emergency frequency.
3. The aircraft must pay attention to this emergency frequency at all times in such a situation.

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 エイはサメと同類で、サメと同じ綱^{こう}に属している。それらは、平らな円盤状の体と、大きく拡張した翼のような胸びれによってサメと区別される。エイの尾は一般的に長くて細く、多くの種では、痛みを伴う傷をつけるために使われる鋭い鋸^{のこぎり}の歯の形をした毒のあるトゲを一つ以上持っている。

Rays are (ア) to sharks and placed with them in the same class. They are (イ) from sharks by a flattened, disklike body and greatly enlarged, winglike pectoral fins. The ray's tail is generally long and slender and, in many (ウ), has one or more sharp, saw-edged, (エ) spines that can be used to cause painful (オ).

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|--------------|------------------|------------|
| 1. connected | 2. distinguished | 3. harmful |
| 4. observed | 5. poisonous | 6. related |
| 7. seeds | 8. species | 9. wounds |

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 Ro-RoとはRoll-on、Roll-offの略で、その言葉は製品の船舶への積載と荷下ろしの様子を記述している。Ro-Ro船は、貨物についている車輪、又は荷台付き車両を用いて積載される車輪付き貨物を運ぶ。その船には通常、ランプまたはエレベーターを介して相互接続された幾つかの階があり、船首または船尾のところにドアがある。このような船の設計には、バラスト水タンクを備えたアンチヒーリングシステムが含まれる。

Ro-Ro is short for Roll-on, Roll-off, which describes how products are loaded on and (ア) from a vessel. Ro-Ro vessels carry wheeled cargo that is loaded on its own wheels or (イ) a platform vehicle. There are (ウ) several stories interconnected via ramps or elevators, and doors located at the (エ) or stern of the ship. The design of these vessels (オ) an anti-heeling system with ballast water tanks.

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|----------------|---------------|--------------|
| 1. aft | 2. bow | 3. concludes |
| 4. disappeared | 5. discharged | 6. includes |
| 7. typically | 8. using | 9. utilities |

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 遭難警報は、明確に識別され、かつ、バネのついた蓋もしくは覆いにより不用意な運用から保護される専用の遭難ボタンによってのみ起動されるものとする。遭難警報の送信開始には、少なくとも二つの独立の動作を必要とされるべきである。

A distress alert should be activated only by (ア) of a dedicated distress button which should be clearly (イ) and protected against inadvertent operation with a spring-loaded (ウ) or cover. The initiation of a distress alert should require (エ) two (オ) actions.

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|---------------|----------------|--------------|
| 1. at least | 2. difference | 3. hands |
| 4. identified | 5. independent | 6. less than |
| 7. lid | 8. means | 9. rid |