

航空無線通信士「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。

Wearing black headsets with tentacle-like sensors stretched over their foreheads, the competitors stared at cubes floating on computer screens as their small white drones prepared for takeoff. "Three, two, one... go!" The racers fixed their thoughts on pushing the cubes, the drones suddenly whirled, rose and buzzed through the air. Some struggled to move, while others zipped confidently across the finish line.

The competition—described as the world's first drone race involving a brain-controlled interface—involved 16 pilots using willpower to drive drones through a 9.1-meter dash over an indoor basketball court at the University of Florida. Organizers hope to make the event an annual intercollegiate spectacle, involving ever-more dynamic moves and challenges. The trophy: a model brain on a pedestal.

Scientists have been able to detect brain waves for more than a century, and mind-controlled technology already is helping paralyzed people move limbs or robotic prosthetics. Now the technology is becoming widely accessible. Researchers want to know how mind-controlled devices can expand and change the way we play, work and live as we see our lives become increasingly reliant on Internet-enabled devices, a concept known as the Internet of Things (IoT). One day it may be possible to use your mind to unlock your car, or explore a virtual world. The new technology could be applied for real-time monitoring of our moods and states of consciousness. Researchers are studying whether they can use a big-rig driver's mind to trigger a device that will tell him when he is too tired to drive.

"One day you could wear a brain-controlled interface device like you wear a watch, to interact with things around you," a lead researcher said.

But as the technology moves toward wider adoption, ethical, legal and privacy questions remain unresolved. Enthusiasts should think carefully before handing over their brain waves for purposes that have yet to be conceived or contained, said Kit Walsh, a staff attorney at the Electronic Frontier Foundation. "EEG readings are similar to fingerprints," she said. "Once I know what the readings look like from your brain in a certain situation, I'll be able to recognize you by that pattern again later on."

<注> tentacle 触角 whirl ブーンと音をたてる zip 勢いよく飛ぶ paralyzed 麻痺した prosthetics 義足・義手など
big-rig タンクローリーのような大型トラック EEG=electroencephalogram 脳波図

(設問)

A-1 Which of the following best describes the race mentioned in the article?

1. None of the drones were able to fly successfully.
2. All of the drones managed to cross the finish line.
3. Some of the drones flew quickly to the finish line but others could barely get started.

A-2 How are the organizers planning to develop the event in the future?

1. They hope to be able to hold the event every year as a race among universities.
2. The plan is to simplify some of the more challenging moves required in the event.
3. The organizers would like to make the event an international one involving college teams from around the world.

A-3 What does the article say about scientists' understanding of brain waves?

1. It has been possible to observe brain waves for more than a hundred years.
2. Mind-controlled technology has not yet been realized in this century.
3. Scientists hope to be able to develop the ability to detect human brain waves in the next century.

A-4 According to the article, what is the 'Internet of Things'?

1. This term refers to the use of mind-controlled devices online.
2. It refers to the networking of various devices that can be connected and controlled through the Internet.
3. This is an expression used in connection with the changing ways some people work from home online.

A-5 How does Kit Walsh advise people to deal with the new technology?

1. She advises people to participate enthusiastically in brain-wave testing.
2. She says that handing over brain waves may be bad for a person's health.
3. She suggests that people should be cautious about letting others use their brain-wave data.

2. 次の英文A-6からA-9までは、航空通信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 It is recommended that an activated distress beacon, even if inadvertently activated (false alarm), be kept on until the RCC is informed. This enables the RCC to work with a more accurate position and identification, allowing resolution of the alert without dispatching SAR facilities needlessly.

<注> inadvertently うっかりして RCC = Rescue Coordination Center SAR = Search and Rescue

(設問) What should be done if a distress beacon has been activated, including in the event of a false alarm?

1. The distress beacon must be turned off immediately if it has been activated by mistake.
2. The position of the distress beacon should be identified by dispatching SAR facilities.
3. The distress beacon should not be turned off until the RCC has resolved the alert satisfactorily.

A-7 As a general rule, it rests with the aircraft station to establish communication with the aeronautical station. For this purpose, the aircraft station may call the aeronautical station only when it comes within the designated operational coverage area of the latter.

(設問) When is it usual for an aircraft station to initiate contact with an aeronautical station?

1. An aircraft station can call an aeronautical station before it enters the aeronautical station's operational coverage area.
2. An aircraft station must wait for the aeronautical station to establish communication.
3. Normally an aircraft station will call an aeronautical station once it has entered the aeronautical station's operational coverage area.

A-8 If a message has not been completely transmitted when instructions to cancel are received, the station transmitting the message shall instruct the receiving station to disregard the incomplete transmission. This shall be effected in radiotelephony by use of an appropriate phrase.

(設問) How should a transmitting station instruct a receiving station when an incomplete message becomes unnecessary?

1. The transmitting station shall instruct the receiving station to repeat and confirm the incomplete transmission.
2. The transmitting station shall use a suitable term to tell the receiving station to ignore the message.
3. The transmitting station should resend the appropriate transmission until the receiving station acknowledges the complete message.

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 121.5 MHz when flying in or over hazardous areas and a requirement has been established by the appropriate authority?

1. An aircraft flying in or over such areas must pay attention to this frequency at all times.
2. The aircraft flying in or over such areas must check the frequency at regular intervals.
3. All aircraft flying in or over such areas need to inform the appropriate authority using the emergency frequency.

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 先日、母親が私の初めての娘に会うために信州から上京してきたので、最寄りの地下鉄の駅に母を迎えに行った。母は、30分ほど遅れて到着した。東京の地下鉄網は複雑なので、母は電車を間違えていた。

The other day, my mother came up (ア) Tokyo from Shinshu to see my first daughter and I (イ) her at the subway station near my house. She arrived about 30 minutes (ウ). The subway (エ) in Tokyo is complicated and she had caught the (オ) train.

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| 1. in | 2. late | 3. lately |
| 4. lost | 5. met | 6. strange |
| 7. system | 8. to | 9. wrong |

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 航空機と鳥との衝突、いわゆるバードストライクは、航空機に深刻な被害をもたらす。世界中の空港では、鳥を追い払うことに苦勞をしている。関西国際空港では、ハヤブサやタカを使って鳥を追い払い、バードストライクを半減することに成功した。

Collisions between airplanes and birds, (ア) bird strikes, can cause (イ) damage to planes. Airports all over the world are (ウ) to drive the birds (エ). Kansai International Airport uses falcons and hawks for this purpose and has succeeded in reducing bird strikes (オ) 50 percent.

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|-------------|----------------|---------------|
| 1. as it is | 2. away | 3. back |
| 4. by | 5. encouraging | 6. serious |
| 7. slight | 8. so-called | 9. struggling |

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 原則として、航空機のSELCALコードは、無線電話の呼出符号と関連するものとする。即ち、飛行番号が無線の呼出符号に使用されている場合には、航空機のSELCALコードは、飛行番号に対照して記載するものとする。その他すべての場合は、航空機のSELCALコードは、航空機登録に対照して記載するものとする。

In (ア), the SELCAL code in the aircraft should be associated (イ) the radiotelephony call sign, i.e. (ウ) the flight number (エ) in the radio call sign, the SELCAL code in the aircraft should be listed against the flight number. In all other cases, the SELCAL code in the aircraft should be listed against the aircraft (オ).

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| 1. is employed | 2. is working | 3. detail |
| 4. of | 5. principle | 6. registration |
| 7. where | 8. why | 9. with |