

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。

In the airborne cousin to the self-driving car, a robot in the cockpit could help human pilots — and eventually even replace them. The U.S. government and industry are collaborating on a program that seeks to replace the second human pilot in two-person flight crews with a robot copilot that never tires or feels stressed out, never gets bored or distracted. The idea is to have the robot free the human pilot, especially in emergencies and demanding situations, to think strategically. "It's really about increasing autonomy and how humans and robots work together so that each can be doing the thing that it's best at," said John Langford, CEO of one of the companies involved in developing the robot.

Sophisticated computers flying planes aren't new. In today's airliners, the autopilot is on nearly the entire time the plane is in the air. Airline pilots do most of their flying for brief minutes during takeoffs and landings, and even those critical phases of flight could be handled by the autopilot.

This program, known as Aircrew Labor In-Cockpit Automation System (ALIAS), goes steps further. For example, cameras allow the robot to see all the cockpit instruments and read the gauges. It can recognize whether switches are in the on or off position, and can flip them to the desired position. And it learns not only from its experience flying the plane, but also from the entire history of flight in that type of plane. The ALIAS robot "can do everything a human can do" except look out the window, Langford said. Give the program time, and maybe the robot will be able to do that too, he said.

But the robot faces a lot of hurdles before it is ready to start replacing human pilots, not the least of which is that it would require a massive rewrite of Federal Aviation Administration safety regulations. Even small changes to FAA regulations often take years. Pilot unions are skeptical that robots can replace humans. Keith Hagy, the Air Line Pilots Association's director of engineering and safety, pointed to instances of multiple system failures during flights where only the heroic efforts of improvising pilots saved lives.

<注> airborne 飛行の distracted 注意散漫になる not the least of which is that とりわけ重要なのは

(設問)

A-1 What is the immediate aim of the collaboration between the U.S. government and industry?

1. The collaboration aims to detect stress and tiredness in human pilots.
2. They are looking to replace one of the human pilots in cases where two pilots fly an aircraft.
3. The initial goal is to replace all human pilots on civil aircraft with robots as soon as possible.

A-2 How may the new system help human pilots in emergency situations?

1. Robots will be more reliable and always make the correct decisions under pressure.
2. The robot will be able to check whether the human pilot is doing the thing that he or she is best at.
3. Having the robot do certain tasks will give the human pilot more time to think.

A-3 What does the article say about autopilot systems currently used in airliners?

1. These systems are mainly used during the takeoff and landing stages of flight.
2. Current autopilot systems are not capable of dealing with any critical phases of flight.
3. Most of the flying during a flight is handled by the autopilot system rather than the human pilot.

A-4 What is likely to be one of the major obstacles to introducing the new technology?

1. The new system is likely to be very expensive, meaning airlines will be reluctant to purchase it.
2. Changing existing flight regulations is very complicated and can take a long time.
3. Although the introduction of the new system would only require small changes to FAA regulations, this could still take a few years.

A-5 How does the director of the pilots' association feel about the new technology?

1. The director enthusiastically welcomes the new technology.
2. The director believes that the new technology will improve the safety of flight.
3. The director is cautious about the technology, warning that humans can react better in emergencies than machines.

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 All stations, whatever their purpose, must be established and operated in such a manner as not to cause harmful interference to the radio services or communications of other Member States or of recognized operating agencies.

(設問) What is a key requirement for the operation of all stations?

1. All stations have a responsibility to avoid causing damaging interference to other radio services or communications.
2. The extent to which a station is permitted to interfere with the communication services of other Member States or recognized operating agencies depends on the purpose of the communication.
3. When a station operates in a manner that causes interference to others, it is required to carry on doing so in accordance with regulations.

A-7 In the aeronautical mobile service, after communication has been established by means of the complete call sign, the aircraft station may use, if confusion is unlikely to arise, an abbreviated call sign or identification.

(設問) Under what circumstances may an aircraft station use an abbreviated call sign or identification?

1. An abbreviated call sign or identification may only be used to initiate communication.
2. An abbreviated call sign or identification should be used in cases where confusion has already arisen.
3. An abbreviated call sign or identification is permitted once successful communication has been established through the use of the complete call sign.

A-8 Frequencies in any band allocated to the aeronautical mobile (R) service are reserved for communications relating to safety and regularity of flight between any aircraft and those aeronautical stations primarily concerned with flight along national or international civil air routes.

(設問) What purposes are the frequencies allocated to the aeronautical mobile (R) service reserved for?

1. The frequencies are primarily reserved for monitoring the regularity of international air traffic.
2. The frequencies are used for communications relating to the safety of flights within national borders only.
3. The frequencies are used for any aircraft to communicate with the aeronautical stations responsible for the safety and regularity of flight.

A-9 If the attempts to establish contact with an aircraft station fail, the aeronautical station should transmit messages addressed to the aircraft, other than messages containing air traffic control clearances, by blind transmission on the frequency or frequencies on which the aircraft is believed to be listening.

(設問) What is an aeronautical station required to do in cases where it fails to establish contact with an aircraft station?

1. In such cases, the aeronautical station is advised to send messages, excluding air traffic control clearances, by blind transmission on the frequency or frequencies on which it believes the aircraft is listening.
2. When an aeronautical station fails to establish contact, it should transmit only messages containing air traffic control clearances.
3. The aeronautical station should transmit no further messages until it has identified the frequency on which the aircraft station is listening.

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 日本の大手航空会社のひとつは、犬が飼い主と客室内で一緒にいることを許可したチャーター便を試行運航した。87人の搭乗客と44匹の犬が、ペットに優しいパッケージツアーに参加した。これは、ペットを貨物室に収容しておかなくてはならないとする航空会社の国内便規則からは逸脱した試みである。

One of the major Japanese airlines has operated a trial charter flight permitting dogs to stay with their owners (ア) the cabin. 87 passengers and 44 dogs (イ) part in the pet-(ウ) package tour, which (エ) from airline rules for domestic flights requiring pets to be stowed in the cargo (オ).

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| 1. deviated | 2. friend | 3. friendly |
| 4. hold | 5. inside | 6. made |
| 7. outside | 8. separated | 9. took |

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 福島県庁は、完全自律型ドローンを使った飛行試験を実施し、海岸に沿って12キロメートル先まで食料を配達した。これまで荷物を携えた自己制御型のドローンが10キロメートルを超えて飛行したという例はなかったと同県庁は説明している。

The Fukushima Prefectural Government (ア) a test flight with a fully (イ) drone to deliver food across a distance of 12 kilometers (ウ) the coast. The prefectural government explained that (エ) previous self-controlled drone had (オ) for more than 10 kilometers with cargo.

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| 1. along | 2. any | 3. autonomous |
| 4. flown | 5. no | 6. performed |
| 7. prepared | 8. self-consistent | 9. through |

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 管制官・パイロット間のデータリンク通信で用いられるメッセージ本文は、標準メッセージ形式で作成されなければならない。本文の長さを適切な略語及びコードを使用することによって短縮できる場合には、普通語の使用を避けなければならない。丁寧な表現など重要でない語及び語句は、使用してはならない。

The text of messages used in controller-pilot data link communications shall be composed (ア) standard message format. Plain language shall be (イ) when the length of the text can be reduced by using appropriate (ウ) and codes. Nonessential words and phrases, (エ) as expressions of (オ), shall not be used.

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| 1. abbreviations | 2. avoided | 3. cables |
| 4. encouraged | 5. in | 6. on |
| 7. politeness | 8. so | 9. such |