

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。

Boeing bid farewell to an icon on Tuesday, delivering its final 747 jumbo jet as thousands of workers who helped build the planes over the past 55 years looked on. Since its first flight in 1969, the giant yet graceful 747 has served as a cargo plane, a commercial aircraft capable of carrying nearly 500 passengers, a transport for NASA's space shuttles, and the Air Force One presidential aircraft. It revolutionized travel, connecting international cities that had never before had direct routes and helping popularize passenger flight.

But over about the past 15 years, Boeing and its European rival Airbus have introduced more profitable and fuel efficient wide-body planes, with only two engines to maintain instead of the 747's four. The final plane is the 1,574th built by Boeing in the Puget Sound region of Washington State. "If you love this business, you've been dreading this moment," said longtime aviation analyst Richard Aboulafia. "Nobody wants a four-engine airliner anymore, but that doesn't erase the tremendous contribution the aircraft made to the development of the industry or its remarkable legacy."

"It was the first big carrier, the first widebody, so it set a new standard for airlines to figure out what to do with it, and how to fill it," said Guillaume de Syon, a history professor at Pennsylvania's Albright College who specializes in aviation and mobility. "It became the essence of mass air travel: You couldn't fill it with people paying full price, so you need to lower prices to get people onboard. It contributed to what happened in the late 1970s with the deregulation of air travel." The first 747 entered service in 1970 on Pan Am's New York-London route, and its timing was terrible, Aboulafia said. It debuted shortly before the oil crisis of 1973, amid a recession that saw Boeing's employment fall from 100,800 employees in 1967 to a low of 38,690 in April 1971. The "Boeing bust" was infamously marked by a billboard near the Seattle-Tacoma International Airport that read, "Will the last person leaving SEATTLE – Turn out the lights."

Delta was the last U.S. airline to use the 747 for passenger flights, which ended in 2017, although some other international carriers continue to fly it, including the German airline Lufthansa. Lufthansa CEO Carsten Spohr recalled traveling in a 747 as a young exchange student and said that when he realized he'd be traveling to the West Coast of the U.S. for Tuesday's event, there was only one way to go: riding first-class in the nose of a Lufthansa 747 from Frankfurt to San Francisco. He promised the crowd Lufthansa would keep flying the 747 for many years to come.

<注> revolutionize 革命を起こす popularize 大衆化する deregulation 自由化

(設問)

A-1 What does the article say about the Boeing 747's effect upon global air travel?

1. It opened up new direct flight routes between countries and popularized air travel.
2. Airlines' commercial viability became a matter of concern after the 747 had popularized air travel.
3. The US president ordered airline companies to reduce air fares to fly more passengers to many places.

A-2 According to the article, why is the Boeing 747 being discontinued?

1. New US regulations to reduce emissions have made the production of large planes impractical.
2. Wide-body planes no longer suit modern tastes with passengers now wanting to travel in smaller aircraft.
3. Modern planes are now more fuel efficient and easier to maintain, making the 747 less cost-effective by comparison.

A-3 How, according to Guillaume de Syon, did the Boeing 747 change air travel?

1. People were willing to pay higher prices for air tickets on such an innovative plane.
2. Deregulation by the US government permitted commercial airlines to use wide body airplanes.
3. Airlines had to rethink their ticket prices in order to have more passengers fill the large plane's seats.

A-4 Judging from the article, what was the reason behind the billboard which said, "Will the last person leaving SEATTLE – Turn out the lights."?

1. The oil crisis of 1973 meant that energy-saving was imperative everywhere in the US, even in Seattle.
2. Employment numbers at Boeing had fallen very low and it was feared Boeing might collapse.
3. Boeing had gone bust because the cost of developing the 747 was too high and it had to save every cent.

A-5 What did the CEO of Lufthansa say to the crowd at the Boeing 747's farewell party?

1. He said to the crowd that he regretted not having been able to fly there in a 747 from Frankfurt.
2. He promised the crowd that the 747 would continue to be used for many years by Lufthansa.
3. He said to the crowd that he remembered his days of flying first-class as a young exchange student.

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 shall radiate the minimum power necessary to ensure a satisfactory service.

(設問) What power does the above provision require when radio stations transmit signals?

1. The power must be the largest possible for the transmitter to ensure a satisfactory service.
2. The power must be as small as possible but large enough to provide a good service.
3. All stations must radiate radio waves at the lowest level even if their services are degraded.

A-7 After the aircraft station has called the aeronautical station, a period of at least 10 seconds should elapse before a second call is made. This should eliminate unnecessary transmissions while the aeronautical station is getting ready to reply to the initial call.

(設問) Why does the above provision require the aircraft station to wait ten seconds before making a second call?

1. To give the aeronautical station time to send a reply to the first call.
2. To avoid the two messages from the calling aircraft station getting mixed together.
3. To give the aeronautical station a chance to reject the clearance request from the aircraft station.

A-8 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 ITU Member States or of recognized operating agencies, or of other duly authorized operating agencies which carry on a radio service, and which operate in accordance with the provisions of the Radio Regulations.

(設問) How must any station set up for any purpose be established and operated?

1. So as not to disrupt the radio communications or services of other ITU Member States or operating agencies properly carrying on radio services.
2. So as to monitor other ITU Member States and operating agencies in order that they may not cause harmful interference to properly operating radio stations.
3. So as not to interfere with most radio services or communications of other ITU Member States, except for those of recognized or duly authorized operating agencies.

A-9 Before transmitting, a station shall take precautions to ensure that it will not interfere with a communication already in progress and that the station called is not in communication with another station.

(設問) What must a station do before transmitting radio signals?

1. A station should request interfering stations to stop all communications and ensure that the station to be called is ready to receive its call.
2. A station should request the station it is calling to stop its communication with other radio stations in order to prevent interference with its own radio communications.
3. A station should ensure that it doesn't interfere with any communication in progress and confirm that the station it is calling is not engaged in another radio communication.

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 日本の空飛ぶ車のスタートアップ企業が電動垂直離着陸機の開発を加速していて、2025年の大阪万博までに初の商業飛行を目指している。その企業は空飛ぶ車が万博会場の上空を疾走し、参加者を遊覧飛行に連れて行くという計画を持っている。この新しい交通手段は、交通渋滞を緩和するだけでなく、緊急医療や災害救助にも使用できる。

A Japanese flying car startup is (ア) the development of its electric (イ) takeoff and landing vehicle, setting its sights on a first commercial flight by the 2025 World Expo in Osaka. The company plans to have flying cars zipping over the Expo (ウ), taking (エ) on pleasure flights. This new mode of transportation will not only help to (オ) traffic jams, but can also be used for medical emergencies and disaster relief.

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| 1. accelerating | 2. ease | 3. erase |
| 4. expanding | 5. participants | 6. revenue |
| 7. upright | 8. venue | 9. vertical |

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 アメリカの研究者たちは、自律型航空機が混雑した空域を航行できるようにするAIパイロットを開発した。AIは衝突を安全に回避し、他の航空機の意図を予測し、(複数の)航空機を追跡してそれらの行動を調整し、パイロットたちや航空管制官たちと無線で通信することができる。彼らは自分たちのシステムの動作が、人間のパイロットが行うものと区別がつかなくなるようAIを開発することを目指している。

Researchers in America have developed an AI pilot that (ア) autonomous aircraft to navigate a crowded airspace. The AI can safely avoid collisions, (イ) the (ウ) of other aircraft, track aircraft and (エ) with their actions, and communicate over the radio with pilots and air traffic controllers. They aim to develop the AI (オ) the behaviors of their system will be indistinguishable from those of a human pilot.

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| 1. content | 2. coordinate | 3. enables |
| 4. ensures | 5. intent | 6. predict |
| 7. preside | 8. so that | 9. which |

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 緊急通信は、すべて、緊急な状態に関連する無線電話通報で構成されなければならない。緊急な状態は、航空機、その他の移動体、又は機上の若しくは視界内の人員の安全に関する状態として定義されるが、即時の救助を必要とするものではない。

Urgency traffic shall (ア) all radiotelephony messages (イ) to the urgency conditions. Urgency conditions are (ウ) as conditions (エ) the safety of an aircraft or other vehicle, or of some person on board it or (オ), not requiring immediate assistance.

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|--------------|---------------|-----------------|
| 1. comprise | 2. compromise | 3. concerning |
| 4. confined | 5. connects | 6. defined |
| 7. invisible | 8. relative | 9. within sight |