

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。

Rising seas and erosion are threatening lighthouses around the U.S. and the world. Volunteers and cash-strapped governments are doing what they can, but the level of concern, like the water, is rising.

New Jersey's East Point Lighthouse has been lighting up Delaware Bay for the better part of two centuries. But those same waters it helped illuminate might bring about its demise. With even a moderate-term solution likely to cost \$3 million or more, New Jersey officials are considering what to do to save the lighthouse. Nancy Patterson, president of the Maurice River Historical Society, says something needs to be done now. State and local governments routinely shore up the perimeter of the lighthouse property with 3,000-pound sandbags and hastily bulldozed earthen walls. During normal conditions, the bay is about 40 yards from the lighthouse; aerial photos from 1940 show about four times as much distance between the lighthouse and the bay as there is now. And during storms, the surf pounds against an earthen wall just 10 yards from the lighthouse's front steps. "This lighthouse is in incredible danger; it's getting worse and worse and worse," Patterson said. "The water is right there, often within feet of the lighthouse." She recently led a save-the-lighthouse rally to call attention to its plight and push the state Department of Environmental Protection to do something to save it before it falls into the bay.

Climate change, widely believed to be hastened by man-made greenhouse gases, is not only melting polar ice, adding to sea levels, but the warmer waters are expanding and some land areas are sinking. Globally, sea levels have been rising over the past century, according to the National Oceanic and Atmospheric Administration, and the rate has increased in recent decades. In New Jersey, seas have risen by 1.3 feet over the past 100 years, said Benjamin Horton, a Rutgers University professor and leading expert on climate change and sea level rise. That's more than in the previous 2,000 years combined, he said. Horton and other Rutgers researchers project that by 2050, seas off New Jersey will rise by an additional 1.4 feet.

<注> erosion 浸食 cash-strapped 資金不足の demise 消滅 perimeter 境界線
plight 苦境

(設問)

A-1 How far was the bay from the East Point Lighthouse in 1940?

1. About 10 yards
2. About 40 yards
3. About 160 yards

A-2 What did Nancy Patterson do to save the lighthouse?

1. She took aerial photos of the seas off New Jersey in 1940.
2. She shored up the surrounding edge of the lighthouse property with many sandbags.
3. She held a public meeting to raise people's concern about the lighthouse and push the relevant New Jersey department.

A-3 In the article, what do many people regard as the reason for the acceleration of climate change?

1. Rising sea levels
2. Melting polar ice
3. Greenhouse gases

A-4 What do Benjamin Horton and his colleagues estimate about sea levels in New Jersey by 2050?

1. They estimate seas off New Jersey will rise by an additional 1.3 feet.
2. They estimate seas off New Jersey will rise by an additional 1.4 feet.
3. They estimate the maintenance cost for the lighthouse to be 3 million dollars.

A-5 Which of the following is correct according to this article?

1. Rising sea levels endanger lighthouses across the world.
2. All lighthouses are still important for the safety of navigation.
3. The state and local governments in New Jersey have done nothing to save the lighthouse.

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 Every effort should be made to keep frequency tolerances and levels of unwanted emissions from transmitting stations at the lowest values which the state of the technique and the nature of the service permit.

(設問) What does the above regulation require in the technical characteristics of transmitting stations?

1. Frequency tolerances or levels of unwanted emissions should be uniformly defined for all services.
2. The state-of-the-art technique should always be applied in transmitting stations regardless of the service.
3. Transmitting stations should keep frequency tolerances and unwanted emissions as low as possible, taking account of the service requirements and applicable technique.

A-7 Any emission capable of causing harmful interference to distress, alarm, urgency or safety communications on the international distress and emergency frequencies established for these purposes by the Radio Regulations is prohibited.

(設問) What kind of emission is prohibited by the above regulation?

1. Emissions which can cause harmful interference to the signals on international distress and emergency frequencies
2. Emissions using international distress and emergency frequencies to establish distress, alarm, urgency or safety communications
3. Emissions which do not interfere with distress, alarm, urgency or safety communications on the internationally designated distress and emergency frequencies in the Radio Regulations

A-8 Wherever necessary for efficient spectrum use, the receivers used by any service should comply as far as possible with the frequency tolerances of the transmitters of that service, due regard being paid to the Doppler effect where appropriate.

(設問) For efficient spectrum use, which of the following conforms with the above regulation?

1. Transmitting stations should take the Doppler effect into account to enable receivers to tolerate the frequency fluctuation.
2. With no Doppler effect, the frequency tolerance of the receivers of any services should be kept to the minimum possible value.
3. The receivers should correspond to the transmitters' frequency tolerance requirements as much as possible, taking account of the Doppler effect when applicable.

A-9 Aeronautical station is defined as a land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

(設問) Which of the following satisfies the definition of an aeronautical station?

1. An aeronautical station is located on land or sometimes at sea in the aeronautical mobile service.
2. Aeronautical stations include aircraft stations for communicating with stations on board ship or on a platform at sea.
3. An aeronautical station is used in the land mobile service and can be located on board ship or on a platform at sea.

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 過去20年間にニシンは6℃未満の海水を求めて、ノルウェーのロフォテン諸島を離れ、300キロ北上した。ノルウェーのシャチは、そのニシンを追っている。シャチの専門家は地球温暖化により長期的にニシンはさらに北上すると言っている。

In the past 20 years, the herring have migrated 300 kilometers north, (ア) the Lofoten islands of Norway, in search of sea waters that remain under 6°C. The Norwegian orcas have (イ) the herring. An orca expert says that, (ウ), the herring are going to move even (エ) north (オ) global warming.

- | | | |
|-----------------------|------------|---------------------|
| 1. arriving | 2. because | 3. due to |
| 4. followed | 5. further | 6. in the long term |
| 7. in the short range | 8. lead | 9. leaving |

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 世界的なクルーズ会社は顧客に新技術を展開しつつある。携帯アプリで顧客は、パスポートをスキャンし、セキュリティ用写真を撮り、そして船に到着前であってもデジタル乗船券を受け取ることが可能となる。ウェアラブルデバイスは給仕に乗客の名前と場所を提供する。

Global cruise lines are (ア) new technology for their customers. A mobile app will (イ) passengers to scan their passport, take a security photo and receive a digital (ウ) before they even arrive at the ship. Wearable devices will provide servers (エ) the passenger's name and (オ).

- | | | |
|------------------|-------------|-----------------|
| 1. boarding pass | 2. carrying | 3. enable |
| 4. force | 5. location | 6. reaching out |
| 7. rolling out | 8. site | 9. with |

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 船舶局の設備は、通信路が設定された後は、送信から受信へ、また、受信から送信へ、できる限り短時間に切り替えることができるものでなければならない。

Installations of any ship station shall be (ア), (イ) communication is established, of (ウ), from transmission to (エ) and vice versa in as short a time as (オ).

- | | | |
|-------------|--------------|--------------|
| 1. ability | 2. before | 3. capable |
| 4. changing | 5. once | 6. possible |
| 7. receiver | 8. reception | 9. variation |