

## 第一級総合無線通信士「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。

The deep oceans span more than half the globe and their cold depths have long been known to contain large, untapped deposits of valuable minerals. These treasures, however, have always been out of reach of miners. But now, the era of deep seabed mining appears to be coming, encouraged by technological advances and decreasing land-based deposits. Rising demand for copper, gold and the rare elements vital in manufacturing smartphones and other high-tech products is causing a rush to the dark seafloor. Worried conservationists are warning that the deep ocean's biodiversity must be protected and not nearly enough is known about the risks of extracting minerals from seabeds.

The Jamaica-based International Seabed Authority, known by its initials ISA, was launched in 1994 and operates under the U.N. Convention on the Law of the Sea. ISA is responsible for the seabed outside the exclusive territorial waters of individual countries and for regulating this new mining frontier. So far, it has issued 27 exploration contracts, the large majority of them since 2011.

During a gathering in Jamaica of representatives from nearly 170 member states, ISA has started drafting a framework to regulate commercial exploitation of seafloor metals and minerals. A group of international scientists, in a July 9 article in the journal Science, urged ISA to temporarily halt authorization of new mining contracts until networks of "marine protected areas" are established around areas targeted for mining. "We owe it to future generations to ensure that we think before we act and gain a thorough understanding of the potential impacts of mining in the deep sea before any mining is permitted," said Matthew Gianni, co-founder of the Deep Sea Conservation Coalition.

Douglas McCauley, an ecologist and conservation biologist at the University of California, Santa Barbara, said seabed mining and other industrial activities like ocean-based power generation and farming indicate that mankind is at the turning point of a "marine industrial revolution." But he also said that there are basic things humanity can do to approach seabed mining intelligently. First, learn what biodiversity is down there before we mine. Second, go slowly on exploitation contracts and study the impacts of this mining as it is happening. Third, set up systems of protected areas before, not after, mining starts.

<注> depths 深海 not nearly enough とても十分とはいえない biodiversity 生物種の多様性

(設問)

- A-1 Which of the following is NOT considered to be a factor in the growing interest in deep-sea mining?
1. Increased use of smartphones
  2. Increasing deposits of land-based valuable minerals
  3. Recent developments in technology
- A-2 What does the article say about the exploration contracts issued by ISA?
1. Most of those contracts have been issued in recent years.
  2. ISA has issued 27 contracts since 2011.
  3. The contracts are only issued for exploration within the exclusive territorial waters of individual countries.
- A-3 What was the main purpose of the July 9 article that appeared in the journal Science?
1. Scientists are concerned that mining in the deep oceans may be dangerous for the people working there.
  2. Scientists want to stop the issuing of contracts until more is known about the effects of deep-sea mining.
  3. Scientists hope to speed up the process of issuing exploration contracts.
- A-4 What does Douglas McCauley suggest as a way to approach seabed mining intelligently?
1. Finding out about life in the deep oceans before starting mining there.
  2. Speeding up exploration in order to study the impacts of mining.
  3. Once deep-sea mining has started, it will be necessary to create some protected areas.
- A-5 Which statement is true according to the article?
1. The ocean depths which contain rare minerals for high-tech products are attracting miners to the seafloor.
  2. ISA as a U.N. body has nothing to do with regulating the new mining frontier.
  3. What Matthew Gianni stressed is that we should act now before we think.

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** The service of an aeronautical station or an aeronautical earth station shall be continuous throughout the period during which it bears responsibility for the radiocommunication service to aircraft in flight.

(設問) What is required of an aeronautical station or an aeronautical earth station responsible for radiocommunication to aircraft in flight?

1. The station responsible should try to maintain a service for most of the required period.
2. The station responsible must provide a service at all times while it is responsible for communication.
3. The station responsible must continue to communicate by radio with all aircraft in flight at all times.

**A-7** Masters should, as appropriate, ensure that when a satellite EPIRB is damaged and needs to be disposed of, or if for any other reason a satellite EPIRB will no longer be used, the EPIRB is made inoperable by removing its battery.

(設問) How should masters make sure that a satellite EPIRB is inoperable in cases where it will no longer be used?

1. Masters should damage the satellite EPIRB appropriately as soon as possible.
2. Masters should dispose of a satellite EPIRB only after checking for appropriate damage.
3. Masters should remove the battery in order to ensure that the satellite EPIRB can no longer be used.

**A-8** All stations which receive a distress alert or call transmitted on the distress and safety frequencies in the MF, HF and VHF bands shall immediately cease any transmission capable of interfering with distress traffic and prepare for subsequent distress traffic.

(設問) What should all stations receiving a distress alert or call transmitted on the distress and safety frequencies in the MF, HF and VHF bands do?

1. A station that receives a distress alert or call must immediately send acknowledgement on one of the distress and safety frequencies.
2. Any station receiving a distress alert or call must begin preparations for further distress traffic in the VHF band.
3. As soon as a station receives a distress alert or call, it must stop any transmission that could interfere with distress traffic and get ready for further distress traffic.

**A-9** Fast rescue boats shall be self-righting or capable of being readily righted by not more than two of their crew. The normal equipment of a fast rescue boat shall include a VHF radiocommunication set which is hands-free and watertight.

<注> self-righting 自動復元の

(設問) Which of the following is most usual for a VHF radiocommunication set on a fast rescue boat?

1. The set can be operated without the use of hands and is not easily damaged by water.
2. The set is usually light enough to be carried by two members of crew or less.
3. The VHF radiocommunication set on a fast rescue boat is normally either self-righting or hands-free.

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10.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** 昨年11月に海上保安庁が発表した情報によると、東京からはるか南方の海底火山噴火によって形成された新しい陸地の面積は、東京ドーム56個分に当たり、さらに拡大する可能性がありそうだ。今後の展開が楽しみだ。

According to the information released in November last year ( ア ) the Japan Coast Guard, the new land ( イ ) by the volcanic eruption in the sea far to the south of Tokyo had expanded to 56 ( ウ ) the area of Tokyo Dome and was ( エ ) to expand ( オ ) further. It will be fascinating to see how the situation develops.

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|-----------|-----------|------------|
| 1. alike  | 2. by     | 3. created |
| 4. even   | 5. firmed | 6. hours   |
| 7. likely | 8. more   | 9. times   |
| 10. with  |           |            |

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10.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** アメリカの気象当局が、世界全体の大気に含まれる二酸化炭素の月別平均濃度は、3月が最も高いことを明らかにした。米国海洋大気庁であるNOAAの専門家たちは、世界各地の40か所のデータを分析し、二酸化炭素濃度は、それぞれの半球とも毎年冬から春にかけて上昇し、植物が活発に育つ夏に下がる傾向にあることを明らかにしている。

American weather officials revealed that ( ア ) monthly global concentration of carbon dioxide in the atmosphere was the highest ever in March. Analysis of data from 40 locations ( イ ) the world by experts of the National Oceanic Atmospheric Administration, ( ウ ) NOAA, indicates that carbon dioxide densities in each hemisphere ( エ ) to increase from winter to spring each year, and to fall in summer when plants grow more ( オ ).

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|------------------|-----------|----------------|
| 1. actively      | 2. and    | 3. around      |
| 4. furiously     | 5. happen | 6. or          |
| 7. over          | 8. tend   | 9. the average |
| 10. the standard |           |                |

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10.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** SAR（捜索及び救助）活動中の航空機による援助は、遭難した乗物への救命いかだ及び機器の投下、ヘリコプターからの訓練された要員の吊り下げ、又は、ヘリコプターによる生存者の現場からの避難が含まれる。遭難中の船舶または生存者は、SAR用航空機から投下可能な特別な機器が提供されることがある。

Assistance by aircraft ( ア ) a SAR (Search and Rescue) mission can ( イ ) dropping ( ウ ) and equipment to craft in distress, lowering ( エ ) individuals from helicopters, or ( オ ) survivors by helicopter. Ships in distress or survivors may be supplied by SAR aircraft with special items of droppable equipment.

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|---------------|------------|---------------|
| 1. during     | 2. enforce | 3. evacuating |
| 4. guarding   | 5. include | 6. life buoys |
| 7. life rafts | 8. over    | 9. registered |
| 10. trained   |            |               |