

一般選抜A日程 問題用紙 <英語> (5-1)

1 次の文章を読み、各問いに答えなさい。

As the modern world becomes more globalized, the risk of the spread of infectious diseases is growing. It is important to have preparations in place should such an emergency occur.

This month, a University of Tokyo research team will start a clinical trial of a vaccine for Ebola hemorrhagic fever. This is an effort to develop the first Ebola vaccine to be produced in Japan. Ebola is a dangerous infectious disease that in some circumstances has a *fatality rate of almost 90 percent. At least 10,000 people died during a major outbreak in western Africa from 2014 to 2016. Even now, Ebola continues to spread in the central African nation of the Democratic Republic of the Congo.

The research team developed the vaccine (①) using an Ebola virus that, through *genetic modifications and other steps, had lost its infectious capacity and ability to multiply. It can be expected that (a) 【within, the, up, administering, body, build, vaccine, *immunity, will, the】 and make it harder for a vaccinated person to become sick from the disease.

Thirty healthy men will receive injections of the vaccine and be checked for *side effects and other developments. Due consideration must be given to safety as research on this vaccine moves ahead.

If the *clinical study confirms the vaccine works, (b) 【its, research, be, further, to, check, will, effectiveness, conducted】 in Africa, where Ebola is still spreading. The researchers should cooperate (②) pharmaceutical companies and aim to put the vaccine to practical use.

This vaccine is initially expected to be used to *inoculate doctors and other personnel involved (③) providing medical treatment should a case of Ebola be detected in Japan. (c) In August, a woman developed a fever after returning to Japan from Congo. Tension ran high among medical personnel until a test for Ebola came back negative. Having a domestically produced vaccine would be useful for maintaining medical systems during emergencies and for preventing the spread of the disease.

It is important to take the perspective of independently securing methods to protect the public from dangerous diseases. (d) The nation must boost its ability to develop and produce vaccines without relying on other countries. When a new strain of influenza spread around the world in 2009, Japan ran short of vaccines and had no option but to urgently import more from overseas. In recent times, dengue fever, for (④) Japan has no vaccines, has been spreading abroad, and cases of dengue have been confirmed even in Tokyo. The government is boosting support for research activities such as vaccine development. Steps (⑤) combat infectious diseases must be strengthened as a national strategy.

A laboratory of the *National Institute of Infectious Diseases in Musashimurayama, Tokyo, operates a facility that *fulfills the requirements of biosafety level 4, the highest international safety standard. Nagasaki University also has started building a (e) BSL-4 facility. The effect of vaccines on extremely dangerous live viruses can be examined at a BSL-4 facility. It is essential to provide a domestic research environment for such work.

(Adapted from <https://the-japan-news.com/news/article/0006231736>)

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[注] *fatality rate 致死率 *genetic modifications 遺伝子改変 *immunity 免疫 *side effects 副作用
*clinical study 臨床検査 *inoculate 接種する *National Institute of Infectious Diseases 国立感染症研究所
*fulfill 満たす

一般選抜A日程 問題用紙 <英語> (5-2)

問1 空所 ①～⑤ に当てはまる最も適切な語句を、それぞれ (ア) ～ (エ) の中から1つ選び記号で答えなさい。

- | | | | | |
|---|-----------|----------|-----------|----------|
| ① | (ア) on | (イ) for | (ウ) to | (エ) by |
| ② | (ア) on | (イ) in | (ウ) with | (エ) for |
| ③ | (ア) on | (イ) in | (ウ) as | (エ) for |
| ④ | (ア) which | (イ) what | (ウ) where | (エ) that |
| ⑤ | (ア) on | (イ) up | (ウ) to | (エ) by |

問2 下線部 (a) の 【 】 内の語句を、下の文意に合うように並べ替えなさい。

「ワクチンを投与すると体内に免疫ができる」

問3 下線部 (b) の 【 】 内の語句を、下の文意に合うように並べ替えなさい。

「その有効性を確認するためにさらなる研究が行われる」

問4 下線部 (c) を和訳しなさい。

問5 下線部 (d) を和訳しなさい。

問6 下線部 (e) はどのようなものか。本文に沿って具体的な特徴(2つ)を日本語で答えなさい。

問7 本文の内容に合っているものを、次の (ア) ～ (カ) の中から2つ選び記号で答えなさい。

- (ア) エボラは感染率、致死率ともに90%近くに達する危険な感染症である。
- (イ) 開発中のエボラワクチンは、実用化すれば初の国産エボラワクチンとなる。
- (ウ) 開発中のエボラワクチンは、治療に当たる医師用に開発されている。
- (エ) 開発中のエボラワクチンは、感染力などを無くしたウイルスを使っている。
- (オ) 新型インフルエンザワクチンは、国内に必要数が常備されている。
- (カ) 都内で確認されたデング熱の患者は、国産デング熱ワクチンによる治療をうけた。

一般選抜A日程 問題用紙 <英語> (5-3)

- 2 次の文章中の空所 ① ～ ⑤ に当てはまる最も適切なものを (ア) ～ (オ) の中から 1 つ選び記号で答えなさい。

Around 40 percent of Americans live in coastal counties. Imagine if the homes and business along our coasts were powered by offshore wind and waves. This doesn't have to remain a dream.

Offshore, the wind blows more strongly and (①) over land, so floating turbines could mean more energy, generated more reliably—and produced near population centers. However, while there are quite a few in development, Block Island Wind Farm, a few miles off of Rhode Island, is currently the solitary offshore commercial wind farm operating in the U.S. Between protracted permitting processes, the need for data on environmental impacts and the fact that wealthy coastal property owners are fighting proposals near their homes, we are way behind the UK, Germany and other European countries (②), gusty resource.

Offshore wind can and should leap from providing essentially zero percent of our national energy to over 10 percent by 2050 if we are to achieve the needed rapid *decarbonization of our *electricity grid. And then (③) for *harnessing the energy of waves and currents, and even spreading solar panels across the sea surface.

While we must take care with ocean ecosystems and species' migratory routes when we choose installation locations, we also need to move quickly.

Not only can the ocean (④), it can also *sequester tons of carbon: so far, it has absorbed around 30 percent of the carbon dioxide we have *emitted by burning *fossil fuels. Lately, there has been a lot of discussion of planting trees, billions of them, (⑤) that about half of global *photosynthesis happens in the ocean.

That land-centric *myopia misses the carbon drawdown potential of *wetlands and seagrasses, coral reefs and oyster reefs, kelp forests and mangrove forests.

(Adapted from <https://blogs.scientificamerican.com/observations/to-save-the-climate-look-to-the-oceans/>)

[注] *decarbonization 脱炭素化 *electricity grid 電力供給網 *harness 利用する *sequester 隔離する
*emitted 排出した *fossil fuels 化石燃料 *photosynthesis 光合成 *myopia 近視(眼的なこと) *wetlands 湿地

- (ア) at making use of this free
(イ) there's the burgeoning technology
(ウ) consistently than it does
(エ) with no mention of the fact
(オ) be a source of carbon-free energy

一般選抜A日程 問題用紙 <英語> (5-4)

- 3 次の日本語の意味になるように、英文の()に当てはまるものを(ア)～(エ)の中から1つ選び記号で答えなさい。

問1 この夏に彼が戻って来るかどうか、私にはわかりません。

I don't know if he () back this summer.

(ア) will come (イ) comes (ウ) came (エ) had come

問2 腰を痛めてしまった。あの重いバッグを2階まで運ぶのではなかった。

I hurt my lower back. I () not have carried those heavy trunks upstairs.

(ア) can (イ) must (ウ) might (エ) should

問3 易しいドイツ語で書かれた本を読みたいのですが。

I'd like to read books () in easy Germany.

(ア) write (イ) wrote (ウ) written (エ) writing

問4 彼女は歌手というよりは女優だ。

She is not () a singer as an actress.

(ア) as well (イ) so famous (ウ) as such (エ) so much

問5 彼が歯科医だと分かって、彼女は驚いた。

He turned out to be a dentist, () surprised her.

(ア) which (イ) whom (ウ) that (エ) it

一般選抜 A 日程 問題用紙 <英語> (5-5)

4 次の英文を指示された語句から始まる文に書き換えなさい。

問 1 Without the sun, all living things would die.

= If it

問 2 There is no telling when the summer season will be over.

= We

5 次の英文の下線部 (ア) ~ (エ) のうち、間違いのあるものを 1 つ選び記号で答えなさい。

問 1 (ア) Would you (イ) mind (ウ) give me a hand (エ) with the dishes?

問 2 The boy (ア) who saved the child (イ) from drowning (ウ) has been presented (エ) for an award for courage.

問 3 Yuko lets her son (ア) to have his own (イ) way, so he (ウ) stays up late (エ) at night.

問 4 Jim (ア) demanded that his sister should (イ) returns the key (ウ) to his car (エ) by tonight.

問 5 I'll be staying (ア) in Osaka (イ) by Monday, so give me (ウ) a call on (エ) Sunday.