

2021年度 入学試験問題(前期日程)

英 語

試験時間 120分

医学部：医学科

問題冊子 問題…… 1 ~ 5 ページ…… 1 ~ 13
解答用紙…… 4枚

配 点……表記のとおり

注 意 事 項

1. 試験開始の合図まで、この問題冊子を開かないこと。
2. 試験中に、問題冊子・解答用紙の印刷不鮮明、ページの落丁・乱丁及び下書用紙の不備等に気付いた場合は、手を挙げて監督者に知らせること。
3. 各解答用紙に受験番号を記入すること。
なお、解答用紙には、必要事項以外は記入しないこと。
4. 解答は、必ず解答用紙の指定された箇所に記入すること。
5. 解答用紙の各ページは、切り離さないこと。
6. 配付された解答用紙は、持ち帰らないこと。
7. 試験終了後、問題冊子、下書用紙は持ち帰ること。
8. 試験終了後、指示があるまでは退室しないこと。

1

次の英文を読んで、設問に答えなさい。(129点)

As Trump defends his Administration's response to the pandemic, he has suggested repeatedly that COVID-19 (coronavirus disease-2019) was impossible to predict. "There's never been anything like this in history," he said, at a press conference on March 19th. "Nobody knew there would be a pandemic⁽ⁱ⁾ or epidemic of this proportion."

As everyone with even a casual interest in the history of science knows, pandemics have (1) the destiny of humanity at least since 430 B.C., when Athens was (2) by a plague that killed as many as two-thirds of its residents, just as the Spartans were attacking the city. Beginning in 165 A.D., smallpox⁽ⁱ⁾ helped (3) the Roman Empire, causing more destruction than foreign armies ever could. And, in the fourteenth century, the Black Death⁽ⁱ⁾ (4) through Europe, killing more than half the population, according to recent estimates.

Yet, by the middle of the twentieth century, many scientists had begun to conceive of a world that was (5) free of infectious epidemics. In 1951, Sir Frank Macfarlane Burnet, a future Nobel prize winner in medicine, wrote, "The fever hospitals are (6) or being turned to other uses. With full use of the knowledge we already possess, the effective (7) of every important infectious disease"—with the exception of polio⁽ⁱ⁾—"is possible." His optimism was (8). Antibiotics⁽ⁱ⁾ had made many lethal diseases easy to (9); improvements in sanitary⁽ⁱ⁾ conditions had transformed the lives of hundreds of millions of people. In developed countries, typhoid⁽ⁱ⁾, cholera⁽ⁱ⁾, and measles⁽ⁱ⁾—major killers throughout history—had largely (10) into memory; even tuberculosis⁽ⁱ⁾, a great cause of suffering for humanity, had been in (11) for nearly half a century. By 1972, Macfarlane, writing with the microbiologist David White, was (12) that the "most likely forecast about the future of infectious diseases is that it will be very dull."

When Anthony Fauci was a young trainee, these kinds of predictions sometimes made him wonder if he had picked the wrong career. "I became concerned that I was entering ... an area of biomedical research that was disappearing," he recalled in one speech. But, since 1984, when Fauci became the director of NIAID (National Institute of Allergy⁽ⁱ⁾ and Infectious Diseases) there has not been a single day in which some epidemic has not threatened the globe. According to the World Health Organization, AIDS has killed more than thirty million people, and nearly forty million are now living with H.I.V. ⁽ⁱ⁾ Tuberculosis, far from sliding into obscurity, infects roughly a quarter of the human population; the W.H.O. says that one and a half million people died from the disease in 2018.

But the greatest threat that humanity faces, by far, is a global outbreak (13) a lethal

virus (14) which no treatment has been found. (15) just a few months, COVID-19 has forced billions of people, (16) nearly every country (17) earth, (18) a panicked withdrawal (19) society. Another pandemic (20) this might appear in two years, or in ten, or in a century. But I have never met a virologist^(iE) or an epidemiologist^(iE) who believes we won't encounter one.

For a deadly virus to flourish, it must meet three critical conditions. First, a new virus—one to which no one has yet developed immunity—must emerge from the animals that produce and harbor such pathogens^(iE). Second, the virus has to make humans sick. (The vast majority do not.) Finally, it must be able to spread efficiently, through coughing, sneezing, or shaking hands. That combination is rare, but, when it appears, the consequences are almost always disastrous.

The Nobel Prize-winning molecular biologist Joshua Lederberg, who died in 2008, was for years the world's most visionary voice about emerging infectious diseases. "Some people think I am being hysterical^(iE), but there are catastrophes ahead," he once wrote. "We live in evolutionary competition with microbes—bacteria and viruses. There is (survivors, be, we, guarantee, that, no, will, the)."^(A)

In 2003, Lederberg joined the future F.D.A. (*Food and Drug Administration*) commissioner Margaret Hamburg and the pandemic specialist Mark Smolinski to edit an influential report, in which prominent scientists argued for a much more aggressive defense of the planet. Titled "Microbial Threats to Health," the report recommended that the U.S. greatly expand its early-warning systems, particularly in the developing world. It also urged leaders to strengthen their ability to respond to microbial threats, with new efforts on the federal, state, and local levels. The recommendations were almost completely ignored.

The next year, a highly pathogenic^(iE) form of avian influenza, H5N1, leaped from water birds to chickens and then to humans. Public-health officials were extremely concerned. In Bangkok, I met with Scott Dowell, who led the Thailand office of the C.D.C.'s (Centers for Disease Control and Prevention) International Emerging Infections Program. "The world just has no idea what it's going to see if this thing comes," he told me. He paused and then reframed his thought. "When, really. It's when. I don't think we can afford the luxury of the word 'if' anymore."

In a sense, the world was lucky with H5N1. Although the U.S. and other countries mounted a modest response, the virus turned out to be deadly^(iE) but not very contagious^(iE). Five years later, the situation was reversed. A new influenza virus, designated H1N1, infected nearly a quarter of the global population before vaccines became widely available. This time, the virus was highly contagious but not nearly as deadly as most varieties of

influenza. The fact that the outbreak was less virulent^(注) than public-health officials had feared created its own danger; by encouraging complacency^(注), it did more to expose the world to the risk of a devastating new pandemic than anything else that had happened in decades.

(“How Anthony Fauci Became America’s Doctor,” *The New Yorker*, <https://www.newyorker.com/magazine/2020/04/20/how-anthony-fauci-became-americas-doctor> [accessed 4 August 2020] より。

ただし出題にあたり本文の趣旨を変えない範囲で一部改変した。)

- (注) pandemic：世界的流行病 smallpox：天然痘 the Black Death：黒死病, ペスト
polio：急性灰白髄炎, ポリオウイルスによる脊髄感染症
antibiotics：抗生物質 sanitary：衛生の typhoid：腸チフス
cholera：コレラ measles：麻疹 tuberculosis：結核
allergy：アレルギー H.I.V.：エイズウイルス(人免疫不全ウイルス)
virologist：ウイルス学者 epidemiologist：疫学者 pathogen：病原体
hysterical：ヒステリックな pathogenic：病原性の deadly：致命的な
contagious：感染性の virulent：毒性の強い complacency：自己満足

設問 1. 本文中の(1)～(12)に入れる最も適切な語を A～L からそれぞれ選び, その記号で答えなさい。ただし重複はしない。

- | | | | |
|-------------------|------------|------------|---------------|
| A. understandable | B. control | C. struck | D. predicting |
| E. vanishing | F. treat | G. decline | H. altered |
| I. ruin | J. largely | K. swept | L. passed |

設問 2. 本文に基づき、下記の1～8の内容について、A～Cの中で該当するものを選び、記号で答えなさい。

- A. 本文で述べられている内容と一致している。
- B. 本文で述べられている内容と一致していない。
- C. 本文で述べられている内容では判断できない。

When he was a young trainee, Anthony Fauci

- 1. wondered whether he had picked the right job as he was afraid of catching a serious infectious disease.
- 2. thought that his chosen career might not be the right one.
- 3. felt that he would be too busy with his work and so would not be able to spend time with his family.
- 4. imagined that research areas relating to infectious disease could shrink in the future.
- 5. thought tuberculosis was a more serious problem than HIV.
- 6. chose the area of infectious disease as he thought it was an area of biomedical research that was disappearing.
- 7. was researching epidemic diseases.
- 8. imagined becoming the director of NIAID.

設問 3. 本文中の(13)～(20)にあてはまるものをA～Gから選び、記号で答えなさい。ただし2回使用する語が1つだけある。(文頭に来るものも小文字で示している。)

- A. in B. like C. on D. for E. into
- F. from G. of

設問 4. 本文の内容を踏まえ、下線部㉑が適切な意味になるように()内の単語を並べ替えなさい。

設問 5. 本文の内容を踏まえ、以下のそれぞれの質問に英語の文で答えなさい。

- 1. What is a combination that doesn't occur very often but when it does can pose serious consequences for humanity?
- 2. How was the U.S.A. recommended to defend itself against deadly microbes? Did the U.S.A. follow these recommendations?

設問 6. 下線部㉒を日本語に訳しなさい。

2

次の英文を読んで設問に答えなさい。(30点)

When U.S. President Donald Trump was not dismissing the severity of the crisis, he was blaming others for it: the Chinese, the Europeans, and, as always, Barack Obama. He blamed governors who were (1) for federal help and had been reduced to fighting one another for lifesaving ventilators^(註). ... Trump even (2) hospital workers in New York City of taking surgical masks and other vital protective equipment^(註) that they needed to stay alive. “Are they going out the back door?” Trump wondered aloud.

(中略)

Since his days of (3) Ronald Reagan and George H.W.Bush, Anthony Fauci has maintained a simple creed: “You stay completely non-political and non-ideological, and you stick to what it is that you do. I’m a scientist and I’m a physician. And that’s it.” He learned the value of candor^(註) early. “Some wise person who used to be in the White House, in the Nixon administration, told me a very interesting dictum^(註) to live by,” he told me in 2016, during a public conversation we had at the fifty-year (4) of his medical-school class. “He said, ‘When you go into the White House, you should be (5) that that is the last time you will ever go in. Because if you go in saying, I’m going to tell somebody something they want to hear, then you’ve shot yourself in the foot.’ Now everybody knows I’m going to tell them exactly what’s the truth.”

Americans have come to (6) on Fauci’s authoritative presence. Perhaps not since the Vietnam era, when Walter Cronkite, the popular anchor^(註) of the “CBS Evening News,” was routinely described as the most trusted man in America, has the country (7) so completely on one person to deliver a daily dose of plain talk. In one national poll, released last Thursday, seventy-eight percent of participants approved of Fauci’s (8). Only seven percent disapproved.

(中略)

Fauci and Trump are about as odd a duo^(註) as American political life has ever produced. Both men are in their seventies. Both come from the outer suburbs of New York City. Both are direct, even blunt^(註). But that’s where the resemblance ends. Fauci has always been a person of unusual (9). Nearing eighty, he works about 18 hours a day. Long ago, when his three children were young, he and his wife, Christine Grady, who runs the bioethics^(註) department at the National Institutes of Health, (10) to respect their family dinnertimes together by starting them when he got home from the office, at around nine o’clock. For decades, Fauci has taken long lunchtime runs, but, during the crisis, he’s cut back his routine to power walking – and only on weekends.

("How Anthony Fauci Became America's Doctor," *The New Yorker*, <https://www.newyorker.com/magazine/2020/04/20/how-anthony-fauci-became-americas-doctor>

[accessed 4 August 2020] より。

ただし出題にあたり本文の趣旨を変えない範囲で一部改変した。)

(注) ventilators : 呼吸器 protective equipment : 防護具 candor : 公平無私
dictum : 意見, 見解, 金言, 格言 anchor : ニュースキャスター
duo : 組み合わせ blunt : ぶっきらぼう bioethics : 生命倫理学

設問 本文中の(1)～(10)に入れる最も適当な語を A～J からそれぞれ選び, その記号で答えなさい。ただし重複はしない。

A. decided B. depended C. reunion D. rely
E. accused F. advising G. performance H. desperate
I. prepared J. discipline

3 次の英文を読んで設問に答えなさい。(61点)

In the last couple of years, toddlers⁽ⁱ⁾ and even babies have begun to be able to use computers. This may seem like the sort of minor news that shows up in the lifestyle section of the paper and in cute YouTube videos. But it actually presages⁽ⁱⁱ⁾ a (1) change in the way human beings live.

Touch and voice interfaces⁽ⁱ⁾ have become (2) only recently; it's hard to remember that the iPhone is just eight years old. For grown-ups, these interfaces are a small additional convenience, but (computers, way, the, with, children, they, interact, transform, young). ^(A) For the first time, toddlers can directly control a smartphone or tablet.

And they do. Young children are fascinated by these devices and remarkably good at (3) them to do things. In recognition of this, in 2015 the American Academy of Pediatrics⁽ⁱⁱ⁾ issued a new report about very young children and technology. For years the Academy had recommended that children younger than two should have no access to screens at all. The new report recognizes that this recommendation has become impracticable⁽ⁱⁱ⁾. It (4) instead, sensibly, on ensuring that when young children look at screens, they do so in concert with attentive adults, and that adults (5) what children see.

But this isn't just news for anxious parents; it's important for the future of the human species. There is a substantial difference between the kind of learning we do as adults, or even as older children, and the kind of learning we do before we are five. ^(B) For adults, learning mostly requires effort and attention; for babies, learning is (6). Grown-up brains are more plastic⁽ⁱⁱ⁾ than we once thought, but very young brains are (7) more plastic; young children's brains are designed to learn.

In the first few years of life, we learn about the way the physical, biological, and psychological world work. Even though our everyday theories of the world depend on our experience, by the time we're adults we simply take them for granted—they're part of the unquestioned background of our lives. When technological, culturally specific knowledge is learned early, it becomes part of the background too. In our culture, children learn how to use numbers and letters before they're five. In rural Guatemala, they learn how to use a machete⁽ⁱ⁾. These abilities require subtle and complicated knowledge, but it's a kind of knowledge that adults in the culture hardly notice (though it may startle visitors from another culture).

© Until now, we couldn't assume that people would know how to use a computer in the way we assume they know how to count. ① Our interactions with computational systems depended on first acquiring the skills of numeracy⁽ⁱⁱ⁾ and literacy. ② You couldn't learn how

a computer worked without first knowing how to use a keyboard. ⑥ That ensured that people learned about computers with relatively staid^(註) and inflexible old brains. ⑦ But even they only really began to learn about computers after they'd reached puberty^(註). ⑧ And that is just when brain plasticity declines precipitously^(註). ⑨

The change in interfaces means that the next generation really will be digital natives. They will be soaked in the digital world and will learn about computers the way previous generations learned language—even earlier than previous generations learned how to read and add. Just as every literate person's brain has been reshaped by reading, (⑩).

(John Brockman, *Know This*, 2017 より。

ただし出題にあたり本文の趣旨を変えない範囲で一部改変した。)

- (注) toddler : よちよち歩きの幼児 presage : 前兆となる
 interface : 異なるものごとの接点, コンピュータとユーザーとを仲介するプログラムや装置 the American Academy of Pediatrics : 米國小児科学会
 impracticable : 実行不可能な plastic : 可塑性のある, 適応性のある
 machete : 中南米諸国で用いる大型のナイフ, なた numeracy : 基礎的な計算能力
 staid : 安定した, 固定した, 不変の puberty : 思春期 precipitously : 急激に

設問 1. 本文中の(1)~(7)にあてはまるものとして最も適切なものを A ~ E から選び, 記号で答えなさい。

- (1) A. fierce B. superficial C. alternate D. profound
 E. mutation
- (2) A. ubiquitous B. prehistoric C. disregard D. psychiatrist
 E. trifle
- (3) A. granting B. getting C. flapping D. outstanding
 E. retailing
- (4) A. assures B. surpasses C. dissolves D. kneels
 E. focuses
- (5) A. reject B. refuse C. supervise D. meditate
 E. speculate
- (6) A. exclusive B. anticipatory C. sensible D. automatic
 E. steep
- (7) A. very B. such C. far D. less
 E. by

設問 2. 本文の内容を踏まえ、下線部 ㉑ が適切な意味になるように()内の単語を並べ替えなさい。

設問 3. 下線部 ㉒ を日本語に訳しなさい。

設問 4. 以下の文は ㉓ ～ ㉔ のどの位置に補うのが最も適切か。その記号を答えなさい。

We think of millennial high-school tech whizzes^(註) as precocious^(註) “digital natives.”

(注) high-school tech whiz：コンピュータの得意な高校生 precocious：早熟な

設問 5. (㉕)に入る最も適切な表現を A ～ D から選び、記号で答えなさい。

- A. my two-year-old granddaughter’s brain will be reshaped by computing
- B. my two-year-old granddaughter’s brain will be reshaped by reading
- C. my brain will be reshaped by computing
- D. my brain will be reshaped by reading

設問 6. 次の 1 ～ 5 の内容について、A ～ C の中で該当するものを選び、記号で答えなさい。

- A. 本文で述べられている内容と一致している。
- B. 本文で述べられている内容と一致していない。
- C. 本文で述べられている内容では判断できない。

1. In 2015, the American Academy of Pediatrics suggested that children younger than two should avoid having access to screens.
2. Children have lower comprehension of a story when their parents read to them from a tablet screen as opposed to a print book.
3. Adults in rural Guatemala feel it is not complicated to use a machete.
4. Differences in interfaces will change how we learn in our first stage of life.
5. In the past, people were thought to learn how to use a computer in the same way as how to count.

4

次の1～5の文が適切な意味になるように()内の単語を正しく並べかえなさい。(15点)

1. (is, the, haven't, attention, they, that, trouble, paid) to this problem.
2. (of, getting, favor, do, me, a, me, the) cup of coffee.
3. He (his, been, has, increasing, income, by, living, beyond) his credit card debt.
4. (visiting, into, talk, her, tried, father, Emma, to) her in Texas.
5. Please tell me (nearest, it, the, here, how, to, is, from, far) town.

5

次の英文を読んで設問に答えなさい。(65点)

In the 1940s, a new wonder chemical was discovered that killed many annoying insects. Farmers were so happy. People fighting malaria^(iE) were so happy. DDT^(iE) was sprayed over crops, across swamps^(iE), and in homes with little investigation of its side effects^(iE). DDT's creator won a Nobel Prize. During the 1950s the early environmental movement in the United States started to raise concerns about levels of DDT accumulating up the food chain into fish and even birds. The great popular science writer Rachel Carson reported her finding that the shells of bird eggs in her area were becoming thinner in *Silent Spring*, a book that became a global bestseller. The idea that humans were allowed to spread invisible substances to kill bugs, and authorities were looking away from any signs of the wider impact on other animals or on humans, was of course frightening.

A fear of insufficient regulation and of irresponsible companies was ignited^(iE) and the global environmental movement was born. Thanks to this movement—and to further contamination scandals^(iE) involving oil spills, plantation workers disabled by pesticides, nuclear reactor failures—the world today has decent chemical and safety regulations covering many countries (though still not close to the impressive coverage of the aviation industry). DDT was banned in several countries and aid agencies had to stop using it.

However, as a side effect, we have been left with a level of public fear of chemical contamination that almost resembles paranoia^(iE). It is called chemophobia^(iE).

This means that a fact-based understanding of topics like childhood vaccinations^(iE), nuclear power and DDT is still extremely difficult today. The memory of insufficient regulation has created automatic mistrust and fear, which blocks the ability to hear data-driven arguments. I will try anyway.

In a devastating example of critical thinking gone bad, highly educated, deeply caring parents avoid the vaccinations that would protect their children from killer diseases. I love critical thinking and I admire skepticism, but only within a framework that respects the evidence. So if you are skeptical about the measles^(iE) vaccination, I ask you to do two things. First, make sure you know what it looks like when a child dies from measles. Most children who catch measles recover but there is still no cure and even with the best modern medicine, one or two in every thousand will die of it. Second, ask yourself, “What kind of evidence would convince me to change my mind?” If the answer is “no evidence could ever change my mind about vaccination,” then you are putting yourself outside evidence-based rationality, outside the very critical thinking that first brought you to this point. In that case, to be consistent in your skepticism about science, next time you have an operation please ask your

surgeon not to bother washing her hands.

More than one thousand old people died escaping from a nuclear leak that killed no one. DDT is harmful but I have been unable to find numbers showing that it has directly killed anyone either. The harm investigations that were not done in the 1940s have been done now. In 2002 the Centers for Disease Control (CDC) and Prevention produced a 497-page document named *Toxicological^(iE) Profile for DDT, DDE and DDD^(iE)*. In 2006 the World Health Organization finally finished reviewing all the scientific investigations and, just like the CDC, classified DDT as “mildly harmful” to humans, stating that it had more health benefits than disadvantages in many situations.

DDT should be used with great caution, but there are pros and cons^(iE). In refugee camps teeming^(iE) with mosquitoes, for example, DDT is often one of the quickest and cheapest ways to save lives. Americans, Europeans, and fear-driven lobbyists^(iE), though, refuse to read the CDC’s and WHO’s lengthy investigations and short recommendations and are not ready to discuss the use of DDT. This means some aid organizations that depend on popular support avoid evidence-based solutions that actually would save lives.

Improvements in regulations have been driven not by death rates but by fear, and in some cases—Fukushima, DDT—fear of an invisible substance has run amok^(iE) and is doing more harm than the substance itself.

⑧ The environment is deteriorating in many parts of the world. But just as dramatic earthquakes receive more news coverage than diarrhea^(iE), small but scary chemical contaminations receive more news coverage than more harmful but less dramatic environmental deteriorations, such as the dying seabed (the ground under the sea) and the urgent matter of overfishing.

Chemophobia also means that every six months there is a “new scientific finding” about a synthetic chemical found in regular food in very low quantities that, if you ate a cargo ship or two of it every day for three years, could kill you. At this point, highly educated people put on their worried faces and discuss it over a glass of red wine. The zero-death toll^(iE) seems to be of no interest in these discussions. The level of fear seems entirely driven by the “chemical” nature of the invisible substance.

(Hans Rosling, *FACTFULLNESS*, 2018 より。)

ただし出題にあたり本文の趣旨を変えない範囲で一部改変した。)

- (注) malaria：マラリア DDT：殺虫剤の一種 swamp：湿地
side effects：副作用 ignite：火をつける, 高ぶらせる
scandal：スキャンダル, 醜聞 paranoia：被害妄想
chemophobia：化学製品恐怖症 vaccination：ワクチン接種 measles：麻疹
Toxicological：毒物学の *DDT, DDE and DDD*：DDT とその関連物質
pros and cons：賛否両論 teem：～がたくさんいる
lobbyist：私的な政治活動を行う人 amok：混乱した diarrhea：下痢
death toll：死亡者数

設問 1. 下記の 1～10 の内容について, A～C の中で該当するものを選び, 記号で答えなさい。

- A. 本文で述べられている内容と一致している。
B. 本文で述べられている内容と一致していない。
C. 本文で述べられている内容では判断できない。
1. DDT は副作用についても十分調べてから使用が開始された。
 2. アメリカでは食物連鎖の中で, DDT が生物の体内へと蓄積されていくことが問題視された。
 3. 殺虫剤を広く散布して害虫を殺すことで, 殺虫剤が効きにくい害虫を生み出す。
 4. 化学物質に関する過去の規制の不備によって生じた不信感は, その化学物質の有効性のデータを示せば解消される。
 5. 十分な教育を受けていない親は, 子供のワクチン接種を恐れる傾向が強い。
 6. 麻疹に感染した子供のごく一部は, 十分な治療を受けることが出来ないので亡くなってしまう。
 7. DDT の直接的な毒性によって死亡した人の人数のはっきりしたデータはない。
 8. DDT の危険性に関する CDC と WHO の見解は異なっている。
 9. どうしても科学が信用出来ないのであれば, 自分を担当する外科医に手術前に手を洗わないように頼んだらよい。
 10. 普通の食べ物に含まれている事が発見される新たな合成化学物質は大変微量なので, 3年間も毎日食べ続けたら命を落とすかもしれない。

設問 2. 下線部 ㉑ を日本語に訳しなさい。

設問 3. DDT の使用が有効と考えられる例を本文中から一つあげて日本語で説明しなさい。

設問 4. 下線部 ㉒ を日本語に訳しなさい。

