

平成 30 年度

医学部医学科一般・学士入学試験問題

(英 語)

- 注意事項
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  2. 解答用紙(マークカード)に，氏名・フリガナ・受験番号の記入および受験番号のマークを忘れないこと。
  3. マークは HB の鉛筆で，はっきりとマークすること。
  4. マークを消す場合，消しゴムで完全に消し，消しくずを残さないこと。
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I 次の英文を読み、下記の設問に答えなさい。

In early November 2016, the capital city of one of the world's fastest growing economies was effectively shut down in an emergency act. The reason was not terrorism, but air pollution. The threat to citizens from smog in Delhi was judged so great that traffic was rationed, coal-fired power stations closed, and diesel generators\*<sup>1</sup> suspended. This was a brave and sane decision in the world's largest democracy.

Right now, Delhi is the world's most polluted city. But air quality is at crisis levels in cities around the world. UNICEF reported, in "Clear the Air for Children," published in October 2016 just before COP 22 in Marrakesh, Morocco, that satellite imagery shows, for the first time, how many children are exposed to outdoor pollution that exceeds global guidelines set by the World Health Organization (WHO), and where they live across the globe. More than 300 million children live in areas with the most toxic levels of outdoor air pollution, UNICEF declared, with a total of 2 billion children in areas where outdoor pollution, ( 1 ) factors such as vehicle emissions, heavy use of fossil fuels, dust and burning of waste, exceeds minimum WHO air quality guidelines. Half of Delhi's schoolchildren have permanently impaired lung capacity, thanks to the air they breathe. <sup>(あ)</sup> Indeed, South Asia has the largest number of children living in these polluted areas, at 620 million, followed by Africa at 520 million children. The East Asia and Pacific region has 450 million children living in areas that exceed guideline limits.

During the crisis, India's capital city was telling people to stay away or work from home, but ( 2 ) no compensation to those who could not, or whose livelihood\*<sup>2</sup> would have suffered. This type of action can only be a short-term solution; it hurts those who can least bear it. Although Prime Minister Theresa May was sheltered from the worst of the choking smog during her November 2016 trip to India, her arrival in Delhi should have been a powerful warning about the effects of privileging economic growth over environmental concerns. <sup>(イ)</sup> Citizens of rich countries are sometimes too relaxed about such things when air pollution ( 3 ) the richest cities as well as the poorest. That London has not yet been closed down in similar fashion to Delhi is only through lack of courage on the part of the UK government.

In reality, air quality in London has at times hit levels even worse than those in Delhi and Beijing. Earlier in 2016, annual air pollution limits were breached in just a week. <sup>(ロ)</sup> In November 2016, in what may be one of the last chances to bring EU law to bear on\*<sup>3</sup> the issue, the UK high court\*<sup>4</sup> ruled that the government had knowingly failed to draw up plans to bring air pollution within legal limits and that there must be immediate action, even if that means drastic measures to curtail\*<sup>5</sup> traffic.

The causes of air pollution ( 4 ) around the world, from coal-fired power plants to

agricultural burning. One constant is traffic. Older cars and diesel engines produce particulates\*<sup>6</sup> that clog up\*<sup>7</sup> the lungs and may enter brain tissue, and also nitrogen oxides\*<sup>8</sup> that affect breathing. Car manufacturers were forced to admit last year that they had flouted\*<sup>9</sup> tests on their diesel emissions. But the bigger question is why, in a shortsighted attempt to reduce greenhouse gases by a tiny amount (diesel cars do get more miles to the gallon), the risks were ignored, and customers persuaded that diesel cars were actually greener.

Now that the consequences for air quality are clear, it is time to rebalance taxation\*<sup>10</sup> and regulation in favor of petrol\*<sup>11</sup>, which is cleaner though producing more carbon, and ( 5 ) cars. In London, Sadiq Khan, the new mayor, to his credit has taken a strong public position on air pollution, in contrast to the previous mayor Boris Johnson's tactics, which amounted to<sup>(1)</sup> unconvincing denial and attempts to silence scientists. Mr. Khan should move faster still on banning the most polluting vehicles — he would find public support in inner London.

Air pollution ( 6 ). From Beijing to Los Angeles, Marseille to Manila, the air we breathe in cities has deteriorated so much that it is no longer safe for children. Adults who grew up breathing cleaner air are more resilient\*<sup>12</sup> in the face of pollution. But when a child's lungs are damaged, they are damaged for life. The next generation already carries the burden of our<sup>(?)</sup> inaction. According to UNICEF Executive Director Anthony Lake, "Pollutants don't only harm children's developing lungs — they can actually cross the blood-brain barrier\*<sup>13</sup> and permanently damage their developing brains — and, thus, their futures. No society can afford to ignore air pollution."

This is a problem we know how to solve. Cut down coal-fired power, cut out diesel in cities, encourage electric cars and public transport. India should follow the declaration of emergency with long-term action, not just this short-term fix. Richer cities, London foremost among them, should be ashamed that they, with all their resources, have failed their children for so long. The UK high court judges were right. It is the responsibility of the UK government to act on this problem immediately.

- [注] \*<sup>1</sup>diesel generator 「ディーゼル発電機」      \*<sup>2</sup>livelihood 「生計」  
 \*<sup>3</sup>bring A to bear on B 「BにAの圧力をかける」  
 \*<sup>4</sup>UK high court 「英国高等法院」      \*<sup>5</sup>curtail 「節減する, 切り詰める」  
 \*<sup>6</sup>particulates 「(エンジンの排気中などの)微粒子群」  
 \*<sup>7</sup>clog up 「動きを妨げる」  
 \*<sup>8</sup>nitrogen oxide 「二酸化窒素, 窒素酸化物」  
 \*<sup>9</sup>fout 「(規則などについて)不正を働く」      \*<sup>10</sup>taxation 「課税」  
 \*<sup>11</sup>petrol 「ガソリン」      \*<sup>12</sup>resilient 「回復力に富む」  
 \*<sup>13</sup>blood-brain barrier 「血液脳関門」脳にとって有害な物質が脳内に侵入するのを防ぐ機構。

問 1 本文中の(1)~(6)の各空欄に入る最も適切なものを, それぞれ①~⑤の中から一つずつ  
 選びなさい。

- (1) ① performed in      ② carried off      ③ called off  
 ④ caused by      ⑤ resulted in
- (2) ① accepting      ② having given  
 ③ would have presented      ④ accepted  
 ⑤ offering
- (3) ① serves      ② advantages      ③ claims  
 ④ afflicts      ⑤ represents
- (4) ① spend      ② differ      ③ search  
 ④ lose      ⑤ keep
- (5) ① quickly unregulate diesel      ② urgently incentivize electric  
 ③ slowly encourage petrol      ④ quietly discourage diesel  
 ⑤ dramatically disrupt electric
- (6) ① creates an opportunity      ② has no cures  
 ③ shames us all      ④ has some value  
 ⑤ is an acceptable reality

問 2 本文中の下線部(あ)と(い)の語句に最も意味の近いものを、それぞれ①～⑤の中から一つずつ選びなさい。

(7) permanently impaired

(あ)

- ① inflexibly hurt
- ② inconstantly weakened
- ③ everlastingly damaged
- ④ hardly affected
- ⑤ temporarily injured

(8) were breached

(い)

- ① were interrupted
- ② were stolen
- ③ were punctured
- ④ were defended
- ⑤ were passed beyond

問 3 本文中の下線部(ア)～(ウ)の意味内容として最も適切なものを、それぞれ①～⑤の中から一つずつ選びなさい。

(9) privileging economic growth over environmental concerns

(ア)

- ① prioritizing both the economy and environmental interests
- ② allowing economic interests to prosper at the expense of environmental safety
- ③ placing economic and environmental interests on an equal footing
- ④ reducing the economy and benefiting environmental concerns
- ⑤ providing avenues for economic growth as well as for environmental safety

(10) which amounted to unconvincing denial

(イ)

- ① which resulted in a failure to convince people of their sins
- ② which were based on skepticism about the dangers of air pollution
- ③ which were used to unconvincingly change the subject from air pollution to something else
- ④ which were actually nothing more than rejection of the available evidence
- ⑤ which created a false sense of security about the issue of air pollution

(11) carries the burden of our inaction

(ウ)

- ① faces the risk of not being resilient to air pollution
- ② takes on the task of building a cleaner society
- ③ confronts the dangers of trying to fight pollution
- ④ accepts the responsibility of cleaning up our mess
- ⑤ experiences the damaging ill-effects of our failure to act

問 4 次の(12)と(13)の英文の問いの答えとして最も適切なものを、それぞれ①～⑤の中から一つずつ選びなさい。

(12) What is the main message of the passage?

- ① UNICEF has warned that the health of the world's children is in serious danger from outdoor pollution that exceeds global guidelines set by the World Health Organization.
- ② Delhi, which is one of the world's fastest growing economies, has suffered huge threats to the health of its schoolchildren because of smog from traffic, coal-fired power stations, and diesel generators.
- ③ Air pollution is caused by coal-fired power plants, by agricultural burning, and even by traffic, particularly when older cars and diesel engine automobiles are involved because these types of vehicles produce nitrogen oxides that affect breathing, and particulates that damage both the lungs and potentially also brain tissue.
- ④ India knows how to solve the problem of air pollution by not only declaring emergencies but also by reducing coal-fired power plants and diesel vehicles in cities, and by encouraging the use of electric cars and public transport.
- ⑤ Because the terribly damaging effects of air pollution, especially for children, are creating ever greater public health and economic problems for all large cities, much stronger, more courageous actions to reduce the sources of such pollution must be quickly undertaken.

(13) Which of the following details is NOT found in the passage?

- ① South Asia has the largest number of children living in areas where pollution exceeds minimum WHO air quality guidelines.
- ② Prime Minister Theresa May visited Delhi, India's capital and one of the world's most polluted big cities during her November 2016 trip to India.
- ③ London's new mayor, Sadiq Khan, has adopted very similar strategies on air pollution to those of his predecessor.
- ④ Children suffer tremendous harm from air pollution because much of the damage to their lungs and to their developing brains affects them for the rest of their lives.
- ⑤ Short-term solutions to the air pollution affecting the biggest cities, such as telling people to stay away from their work places, or to work from home, without any compensation for lost earnings, hurts those who can least afford it.

II 次の(14)~(23)の各英文の空欄に入る最も適切なものを、それぞれ①~⑤の中から一つずつ選びなさい。

(14) Never before ( ) as rapidly as it has during the last decades.

- ① technology is developing                      ② technology has developed
- ③ has technology developed                      ④ has developed technology
- ⑤ is developing technology

(15) ( ) you pay your share, you cannot come with us.

- ① Unless              ② Despite              ③ Once              ④ While              ⑤ If

(16) My brother will never ( ) so early.

- ① got used to get up                      ② get used to getting up
- ③ get use to getting up                      ④ being used to get up
- ⑤ have used to getting up

(17) I was quite worried about being the one to deliver the bad news to her. I ( ) worried at all! Someone had already told her everything that had occurred and she had taken the necessary steps to improve the situation.

- ① shouldn't                      ② mustn't have                      ③ needn't have
- ④ didn't have                      ⑤ hadn't

(18) The science of physics is concerned with everything ( ) to the tiniest, closest particles.

- ① the most galaxies at distance
- ② from the most distant galaxies
- ③ galaxies the greatest distance from
- ④ which are the most distant galaxies
- ⑤ to have with the most distant galaxies

(19) Many people doubt the viability of current efforts to create artificial intelligence that would have the same level of ( ) as that of a human brain.

- ① average movement                      ② stiff formation                      ③ robotic mechanics
- ④ ingenious complexity                      ⑤ absurd intuition



(20) The illegal immigrant tried to ( ) a local, but his accent betrayed him.

- ① pass himself off as
- ② place his confidence in
- ③ pay lip service to
- ④ put himself in the shoes of
- ⑤ make a clean breast of

(21) The inductive method of reasoning is the basis of the common sense ( ).

- ① acting on which people
- ② upon which people act
- ③ which people act
- ④ people act on it
- ⑤ use people to act

(22) I'm much ( ) you for your timely help.

- ① accustomed to
- ② opposed to
- ③ akin to
- ④ obliged to
- ⑤ appealed to

(23) A lot of young people successfully ( ) themselves into their new surroundings.

- ① inquire
- ② indulge
- ③ inflict
- ④ inherit
- ⑤ integrate

- III 次の英文が論理的に意味の通る内容として完成するように、(24)～(28)の空欄に入る最も適切なものを、①～⑤の中からそれぞれ一つずつ選びなさい。ただし、各選択肢は一度しか使えません。

The 2014 West African Ebola outbreak killed 11,310 people. Liberian nursing assistant Salome Karwah was not one of them. But just because Karwah escaped Ebola, it didn't mean she was secure against the failures of Liberia's broken medical system. ( 24 )

Karwah used to joke that survivors had "super powers" and that it was her moral duty to use those powers for the betterment of humankind. So as soon as she recovered, she returned to the hospital where she had been treated — the Médecins Sans Frontières (MSF) Ebola treatment unit just outside of the capital, Monrovia — to help other patients. ( 25 ) It was her determination to help Ebola patients when most of the world fled<sup>\*1</sup> in fear that put her among the Ebola Fighters who were named TIME Magazine's Person of the Year in 2014.

When the outbreak in Liberia ended, she finally married her fiancé, changed her name to Salome Harris, and had her third child. Then she got pregnant again. On Feb. 17, she delivered a healthy boy, Solomon, by cesarean section<sup>\*2</sup>. ( 26 ) Within hours of coming home, Karwah lapsed into convulsions<sup>\*3</sup>. ( 27 ) Her foaming mouth and violent seizures<sup>\*4</sup> panicked the staff. They all gave her distance. Karwah died the next day. ( 28 ) Still, she says, if her sister had been treated immediately, Karwah might have had a chance. Instead, "she was stigmatized."

News of Karwah's death rippled<sup>\*5</sup> far beyond her small community in Liberia. Those who knew her for her tireless cheer in the MSF Ebola treatment clinic were devastated. "To survive Ebola and then die in the larger yet silent epidemic of health system failure... I have no words," says Ella Watson-Stryker, an MSF health promoter who worked with Karwah in Liberia and was also among the Ebola Fighters on the 2014 TIME cover.

[注] \*<sup>1</sup>flee 「逃げる」の過去形                      \*<sup>2</sup>cesarean section 「帝王切開」

\*<sup>3</sup>convulsion 「けいれん, ひきつけ」            \*<sup>4</sup>seizure 「発作」

\*<sup>5</sup>ripple 「(知らせ・影響などが)波紋のように広がる」

- ① Her husband and her sister rushed her back to the hospital, but no one would touch her.
- ② Her sister Manley doesn't know what caused the convulsions, but believes that something went wrong in the surgery.
- ③ Not only did she understand what they were going through, she was one of the rare people who could comfort the sick with hands-on care.
- ④ She was discharged from hospital three days later.
- ⑤ She died on Feb. 21, 2017, from complications in childbirth and the lingering social stigma faced by many of Ebola's survivors.

IV 次の英文が論理的に意味の通る内容となるように、(29)～(32)の空欄に入る最も適切なものを、それぞれ①～⑤の中から一つずつ選びなさい。

More than 2.7 billion people will face shortages of fresh water by 2025. There is, in fact, only a limited amount of water on the planet. Less than 3 percent of the world's water is fresh, and most of it is trapped in polar ice or buried underground in springs too deep to reach. Freshwater lakes, rivers and reservoirs may seem ( 29 ) but such sources provide just a drop in the bucket. Even if supplies are sufficient or ( 30 ), such sources of water are increasingly at risk due to various forms of pollution. Fierce national competition for water resources ( 31 ) that water issues contain the seeds of violent conflict. International cooperation is therefore ( 32 ) urgent.

(29) ① prosperous ② empty ③ safe ④ polluted ⑤ numerous

(30) ① seem to be successful ② prove to be adequate ③ shown as deficient  
④ seem totally ineffective ⑤ shown as contaminated

(31) ① is growing risks ② has rational scope ③ had accumulated risks  
④ has prompted fears ⑤ had solved concerns

(32) ① imperative and critically  
② vital and not  
③ possible but clearly  
④ necessary and insufficiently  
⑤ important by whatever means

V 次の会話文を読んで、以下の設問に答えなさい。

Mark: I know you are a highly health-conscious person. Does that mean you're against genetically modified or GM food?

Erica: As a matter of fact, I mostly am. ( 33 )

Mark: Aren't you being a little too skeptical? Maybe you expect too much? ( 34 )

Erica: Listen, Mark, your information is outdated, I think. I read recently how one scientist tried an experiment. He fed rats potatoes with insect-resistant genes added to the potato genome. ( 35 )

Mark: I didn't know that! Whoa, that's scary! I guess that's why consumer groups have been calling for the labeling of biotech food. In fact, many companies have already begun that practice because they seem to have realized that a "Non-GM product" label could be good marketing. ( 36 )

Erica: Look, I understand some of the arguments for GM food. As we face the threats of global warming, loss of ecosystems, big problems with traditional agriculture, and as our population explodes, we will have to change many things just to manage and to cope. ( 37 ) Maybe GM crops will find a place in some of those strategies. So, let's all keep an open mind.

問 1 会話文が論理的に意味の通る内容として完成するように、(33)～(37)の空欄に入る最も適切なものを、①～⑤の中からそれぞれ一つずつ選びなさい。ただし、各選択肢は一度しか使えません。

- ① I guess it's still early days for this technology and the world's consumers are still leaning towards more traditional non-GM food.
- ② From what I've read, it seems that GM food is not substantially different from conventional food, and that there is no real risk in its consumption.
- ③ How we produce enough safe, healthy food to feed everyone will be one of our greatest challenges.
- ④ The potatoes had become more resistant to insects, but the frightening thing was that the rats' brains shrunk, and they suffered growth problems and damage to their immune systems.
- ⑤ I'm not totally convinced GM food is perfectly safe, at least not right now.

問 2 会話文について、(38)の英文の問いの答えとして最も適切なものを、①～⑤の中から一つ選びなさい。

(38) How would you characterize and describe the positions on GM food of both speakers?

- ① Mark is shocked that GM food is still not safe enough for human consumption but remains cautiously optimistic, whereas Erica considers the whole concept of GM food to be unworkable and flawed.
- ② Mark supports the use of GM food because it would address many of the agricultural concerns the world will face as global warming accelerates, but Erica remains unconvinced that GM food will play any such roles in the near future.
- ③ Erica thinks that, because of the study she cited, GM food could result in too many serious health problems for it to ever become widespread, but Mark does not believe the study's findings.
- ④ Both Erica and Mark are quite skeptical about how useful such GM food will be for future societies and both think they should be cautious about this issue, particularly as it relates to the potential environmental problems such technology could cause.
- ⑤ Mark seems to be more supportive of, and less informed on GM food than is Erica, but Erica, who has serious concerns about GM food, also recognizes that the severe food security challenges facing humanity in the future will require many different strategies and solutions, possibly including GM food.

VI 次の(A)と(B)の各英文の意味が論理的に最もよく通るように、それぞれ①～⑧の語(句)を各空欄に一つずつ入れて下線部を完成させ、(39)～(44)の空欄に入るものを選びなさい。ただし、各選択肢は一度しか使えません。

(A) Foolishly ( ) ( 39 ) ( ), I used to ( ) ( 40 ) ( ) by his/her ( 41 ) power and ( ). I could see no good where there was no logic, no charm where there was no learning. Now, I think that one has to distinguish between two forms of intelligence, that of the brain, and that of the heart, and I have come to regard the second as by far the more important.

- |              |         |            |                |
|--------------|---------|------------|----------------|
| ① a person   | ② judge | ③ was      | ④ the worth of |
| ⑤ attainment | ⑥ as I  | ⑦ arrogant | ⑧ intellectual |

(B) Thank you for this opportunity to share this original concept, something I consider my brainchild, with so many of the world's top architects. Although ( ) ( 42 ) ( ) ( 43 ) ( ), I am convinced ( ) ( ) ( 44 ) this happen. I know a lot of you may be wondering why I want to build such a structure. There is actually a story behind this project. I was in a friend's apartment in New York, and I was amazed by the view outside the window. I thought to myself, "The view is splendid, but it would be better if everybody who lived in the building could see it."

- |                        |          |                       |
|------------------------|----------|-----------------------|
| ① we can               | ② it may | ③ a rotating building |
| ④ that                 | ⑤ build  | ⑥ make                |
| ⑦ seem too challenging | ⑧ to     |                       |

