

令和2年度・入学試験問題

英 語 (前)

注 意 事 項

1. 試験開始の合図があるまで、この問題冊子を開いてはいけません。
2. この冊子は16ページあります。
3. 試験開始後、落丁・乱丁・印刷不鮮明の箇所があれば申し出なさい。
4. 試験開始後、すべての解答用紙に氏名(カタカナ)及び受験番号を記入しなさい。
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問題 I

以下の文章を読み、下の問いに答えなさい。

Asia is aging fast: by 2040, 16 percent of the region's population will be older than 65, more than double the 7.8 percent share in 2015. While the rise in healthy life expectancy is a positive development, this demographic shift⁽¹⁾ poses a serious threat to many economies, which are already losing vitality.

A consistent supply of young, skilled workers was an essential factor of Asia's rapid economic catch-up process over the last three decades. That process is now over, and middle-income countries like China and Vietnam are now facing accelerating population aging. In South Korea, the working-age population (15-64 years) will shrink (ア) 10 percent from 2017 to 2030.

Against this background, the only way to sustain the labor supply — aside from immigration — is to keep people in employment beyond the traditional retirement age. The good news is that a growing number of seniors in Asia are already working. According to the OECD*, the share of working South Koreans aged 65-69 was as high as 45 percent and 33 percent for 70-74 year-olds in 2016.

Unfortunately, many of the jobs performed by elderly workers are low-paid. And, as South Korea's rising youth unemployment rate suggests, seniors may be replacing their younger counterparts, instead of working alongside them — effectively defeating the purpose of including more elderly Koreans in the labor force.

One problem is that younger workers tend to be more productive than their senior counterparts. Some studies indicate that workers everywhere are most productive between the ages of 30 and 45.

While older workers have plenty to offer, including critical job skills such as communication and problem-solving, owing (イ) their extensive experience, their physical and cognitive* capacities tend to decline. Together with a lack of technical capabilities such as ICT* skills, this undermines* their

ability to adapt to the fast-changing technologies that are the lifeblood of today's economies.

Against this background, it is vital not only to ensure that there are enough quality jobs for all workers, old and young, but also to raise productivity among older workers — an objective that new technologies can help to achieve. For example, advances in medical science and biotechnology are helping to stem workers' physical and cognitive decline.

Meanwhile, technologies like robots are displacing a growing share of manual labor, leaving less physically demanding jobs for humans. The potential of these technologies is not lost on countries such as Germany, Japan and South Korea, where the workforce is aging the fastest, and where automation is being adopted particularly quickly.

But if seniors are to occupy high quality jobs in the new economy, they need access to more effective lifelong learning programs that enable them to upgrade their skills continuously in response to technological change. Such training can be made available through various channels — including private firms and trade unions — with government support.

Seniors need to be encouraged to seize these opportunities, (A) it requires them to take a break from full-time employment, (B) on-the-job training is also a desirable option. In fact, participation in on-the-job training by middle-aged and elderly workers in Japan and South Korea is currently lower than in other advanced economies, such as the United States and Finland, meaning that there should be space for improvement. To that end, governments might consider providing vouchers* that workers can use to pay (ウ) training that will support progress in multiple jobs, rather than focusing on specific job or company-related skills.

It is not only seniors who need access to upgraded education and training programs. Young people, too, need to be better prepared for a fast-changing work environment. Poor-quality basic education prevents students (エ)

getting the benefits of subsequent education and skills training. In many Asian countries, formal education systems often fail to produce graduates with adequate cognitive abilities and technical competencies to fill the labor market's needs.

To meet those needs, all levels of education and training will have to provide students (才) the “skills of tomorrow.” In an era of artificial intelligence, that must include the non-routine cognitive and interpersonal skills — problem solving, critical thinking, collaboration and communication — that many older, more experienced workers already possess.

Rapid population aging no doubt poses a serious threat to Asia's long-term economic prospects. But it also represents an important opportunity to expand the labor pool and take advantage of older workers' existing skills. With the right policies, Asian countries can mitigate* the risks of population aging and make good use of their “silver dividend**” to become more productive, resilient and dynamic than ever.

出典：The Japan Times, (May 30, 2018) より一部改変

*注

OECD：Organisation for Economic Co-operation and Development (経済協力開発機構) の略

cognitive：認知的

ICT：information and communication technology (情報通信技術) の略

undermine：害する

voucher：クーポン券

mitigate：減らす

dividend：分配

問 1 下線部(1) this demographic shift は具体的に何を意味しているのか，日本語 10 字以内で答えなさい。

問 2 空欄(ア)～(オ)に入る最も適切な前置詞を下の[]の中から選びなさい。各単語は 1 回のみ使用できる。

[to for with from by]

問 3 下線部(2)を日本語 80 字以内で訳しなさい。

問 4 下線部(3) stem に意味上最も類似する語を選び，記号で答えなさい。

(a) support

(b) criticize

(c) stop

(d) promote

問 5 空欄(A)と(B)に入る，文脈上最も適切な語句の組み合わせを下記の選択肢から選び，記号で答えなさい。

(a) A : because B : as though

(b) A : whether B : because

(c) A : even if B : though

(d) A : though B : whether

問 6 下線部(4) To that end の意味する具体的な内容として最も適切なものを下記の選択肢から選び、記号で答えなさい。

- (a) to encourage seniors in Japan and South Korea to receive on-the-job training
- (b) to encourage younger workers in Japan and South Korea to participate in on-the-job training
- (c) to encourage seniors in the United States and Finland to receive on-the-job training
- (d) to encourage younger workers in the United States and Finland to participate in on-the-job training

問 7 本文の内容と合っている文章に○を、合っていない文章に×をつけなさい。

- (a) The only way to maintain the labor force is to accept immigrants while Asia is aging fast.
- (b) Older workers can provide essential work skills such as communication and problem-solving based on their rich experience.
- (c) Formal education systems do not necessarily produce graduates with adequate cognitive abilities and technical competencies to fill the labor market's needs.
- (d) The unemployment rate of young workers in South Korea is rising because their physical and cognitive capacities tend to decline.
- (e) The working population in Asia isn't aging because the process of a consistent supply of young, skilled workers isn't over now.

問題Ⅱ

以下の文章を読み、下の問いに答えなさい。

The designer is a planner with an aesthetic sense. Certain industrial products depend in large measure on the designer for their success. Nearly always the shape of a thing, be it a typewriter, a pair of binoculars*, an armchair, a ventilator*, a saucepan or a refrigerator, will have an important effect on sales: the better designed it is, the more it will sell.

The term 'designer' was first used in this sense in America. It does not refer to an engineer, who designs machines or mechanical parts, workshops or other specialized buildings. The engineer therefore thinks of the aesthetic side of the job as simply a matter of providing a finish, and although this may be most scrupulously* done he avoids aesthetic problems that are bound up with contemporary culture because such things are not considered useful.
(1) [writing / never / an / be / poetry / engineer / must / caught]. The designer
(2) works differently. He gives the right weight to each part of the project in hand, and he knows that the ultimate form of the object is psychologically vital when the potential buyer is making up his mind. He therefore tries to give it a form as appropriate as possible to its function, a form that one might say arises spontaneously from the function, from the mechanical part (when there is one), from the most appropriate material, from the most up-to-date production techniques, from a calculation of costs, and from other psychological and aesthetic factors.

We have discarded beauty in the abstract sense, as something stuck on to the technical part of a thing, like a stylish car body or a decoration tastefully chosen from the work of some great artist. Instead we have formal coherence, rather as we see it in nature. A leaf has the (ア) it has because it belongs to a certain tree and fulfils a certain (イ); its structure is determined by the veins* which carry the sap, and the skeleton that supports it might have been worked out by mathematics. Even so, there are many kinds of leaf, and

the leaves of any single tree differ slightly among themselves. But if we saw a fig-leaf* on a weeping-willow* we would have the feeling that all was not well. It would lack coherence. A leaf is beautiful not because it is stylish but because it is natural, created in its exact (ウ) by its exact (エ). A designer tries to make an object as naturally as a tree puts forth a leaf. He does not smother* his object with his own personal taste but tries to be objective. He helps the object, if I may so put it, to make itself by its own proper means, so that a ventilator comes to have just the shape of a ventilator, a *fiasco** for wine has the shape that blown glass gives it, as a cat is inevitably covered with cat-fur. Each object takes on its own form. But of course this will not be fixed and final because techniques change, new materials are discovered, and with every innovation the problem arises again and the form of the object may change.

(a) one time people thought in terms of fine art and commercial art, pure art and applied art. So we used to have sewing-machines built by engineers and then decorated by an artist in gold and mother-of-pearl*. Now we no longer have this distinction (b) fine and not-fine, pure and applied. The definition of art that has caused so much confusion (c) recent times, and allowed so many fast ones to be pulled, is now losing its prestige. Art is once more becoming a trade, as it was in ancient times when the artist was summoned (d) society to make certain works of visual communication (called frescoes*) to inform the public of a certain religious event. Today the designer (in this case the graphic designer) is called upon to make a communication (called a poster) to inform the public of some new development in a certain field. And why is it the designer who is called upon? Because the designer knows about printing, about the techniques used, and he uses forms and colours according to their psychological functions. He does not just make an artistic sketch and leave it up to the printer to reproduce it as best he may. He thinks from the start in terms of printing techniques, and it is with these

that he makes his poster.

The designer is therefore the artist of today, not because he is a genius but because he works in such a way as to reestablish contact between art and the public, because he has the humility and ability to respond to whatever demand is made of him by the society in which he lives, because he knows his job, and the ways and means of solving each problem of design. And finally because he responds to the human needs of his time, and helps people to solve certain problems (e) stylistic preconceptions or false notions of artistic dignity derived (f) the schism* of the arts.

出典：Bruno Munari, *What is a Designer?* Design as Art, 1966 より一部改変

*注

binoculars：双眼鏡

ventilator：送風機

scrupulously：周到に

veins which carry the sap：葉脈

fig-leaf：イチジクの葉

weeping-willow：シダレヤナギ

smother：抑え込む

fiasco：ワイン用の丸底ガラスびん

mother-of-pearl：真珠層

frescoes：フレスコ壁画

schism：分裂

問 1 下線部(1)の具体的な内容を、同じ段落から英単語 2 語で抜き出さない。

問 2 下線部(2)の[]内の語を文意に合うように適切な語順に並び替えなさい。ただし、文頭の文字は大文字に書き換えること。

問 3 空欄(ア)～(エ)には function か form のいずれかの語が入ります。適切な語を記入しなさい。

問 4 空欄(a)～(f)に以下の前置詞から適切なものを選びなさい。各単語は1回のみ使用できる。ただし、文頭の文字は大文字に書き換えること。

[in without at between from by]

問 5 下線部(3)の答として最も適切な文章を下記の選択肢から選んで、記号で答えなさい。

1. Because the artist is losing his prestige
2. Because the designer is good at printing and has connections with the printing industry
3. Because the artist of today can only inform the public of certain religious events
4. Because the artist is a part of a trade
5. Because the designer bases his designs on the knowledge of the processes that go into the production of a poster

問 6 下線部(4)をもとに、今日の芸術家はどのような仕事をしているのか、60字以内の日本語でまとめなさい。

問題Ⅲ 以下の文章を読み、下の問いに答えなさい。

Indonesia, Iraq and South Africa now rank among the ten countries with the highest number of under-immunized* children worldwide, even though these countries are richer than many of their neighbors. What is going on?

Not so long ago, improving the health of the world's poorest people meant focusing on the world's poorest countries. That's changing. Soon, the majority of the weakest populations will be in middle-income countries (MICs), where gross national income per capita is between US\$ 995 and \$12,055 per year. Increasing migration, urbanization, conflict and climate change are causing (1) inequities* to yawn ever wider, despite United Nations Sustainable Development Goals to leave no one behind.

As the World Health Assembly meets in Geneva, Switzerland, next week, the development community must tackle an emerging problem: how do we (2) increase access to vaccines and essential health cares in countries that can — at least according to their gross national incomes — afford them?

The Vaccine Alliance, Gavi, was founded in 2000 to boost immunization in the poorest countries. It is credited with helping to vaccinate more than 700 million children against a range of diseases, from measles* and diphtheria* to pneumonia* and cervical cancer*. Despite success in the poorest countries, an analysis we carried out this year found that, since 2010, routine immunization levels have either stagnated* or dropped in 54 of 85 MICs too prosperous to qualify for Gavi support.

We project (3) that by 2030, almost 70% of the world's under-immunized children will be living in countries ineligible for Gavi's vaccination programs, such as Nigeria, India and the Philippines.

Gavi's programs support new and expensive childhood vaccinations. Governments take on more of the cost as countries' economies grow. This means that children in some of the countries with the weakest economies are

actually better protected against infectious disease than are those in some wealthier countries. South Africa, for example, has a gross national income per capita of around seven times that of Rwanda. (7) only 66% of its children receive the routine three doses of the DTP3 vaccine against diphtheria, tetanus* and pertussis*— compared with 98% in Rwanda.

Unsupported MICs are also neglecting important new vaccines that have huge impacts on death and disease rates. For example, 52% are yet to introduce the pneumococcal* conjugate vaccine, and in 61%, plans to introduce rotavirus* vaccine are still pending. Together, these vaccines can help to protect against two of the biggest killers of under-fives: pneumonia and diarrhea*.

That does not mean that MICs are investing less in health care. Those that have never received Gavi support currently spend an average of \$90 per live birth on routine immunization, versus \$25 in Gavi-supported low-income countries. (1) immunization programs in these MICs struggle to reach weak populations. That's often for a combination of reasons: domestic resources are allocated inefficiently; efforts to reach marginalized communities are not a political priority; and health systems are unable to cope with additional stressors.

Those interacting factors help to explain why the main burden of unimmunized people is shifting from mostly low-income countries to MICs. By 2025, nearly 80% of people in the lowest income groups — those living on less than \$8 a day — will be in MICs. This is almost double the proportion in 2000. As the economies of highly populated low-income countries grow, many, including India (with 1.3 billion people) and Vietnam (with 96 million people), are being re-classified to middle-income status. As a result, a greater portion⁽⁴⁾ of the world's population lives in MICs. However, because economic growth is not distributed equitably, many people in these countries remain poor.

Another factor is instability. The past ten years have seen conflicts more

than double. This has contributed to record global migration. Of the 68.5 million people currently displaced from their homes and less likely to receive vaccinations, more than half are in MICs. At the same time, urbanization is increasing fastest in these countries. More than one-third of urban populations in MICs live in slums, where infections can spread quickly.

All this demands a rethink of global health policy. MICs need support to strengthen their health systems and to improve how they buy vaccines and regulate them. They need access to information technologies to monitor who is getting vaccines, to target at-risk communities and to evaluate strategies. And mechanisms are needed that set prices according to what countries can reasonably pay. Wealthy countries should pay more for vaccines. But according to World Health Organization data, the pneumococcal vaccine, for example, costs, on average, eight times more in never-supported MICs than in countries receiving Gavi support, [even, pay, MICs', though, larger, might, the, ability, to, not, be, commensurately]⁽⁵⁾

Since 1990, childhood mortality has more than halved worldwide — mainly because fewer under-fives now die from infectious disease. Polio is on the brink of eradication*, with just 33 cases last year. It is time for the global health community to adapt: we must not leave behind vulnerable populations in middle-income countries.

出典：Nature 569, 309 (2019) より一部改変

*注

immunized : 免疫する

inequities : 不公平

measles : はしか(麻疹)

diphtheria : ジフテリア

pneumonia : 肺炎

cervical cancer : 子宮頸癌

stagnate : 停滞する

tetanus : 破傷風

pertussis : 百日咳

pneumococcal : 肺炎球菌の

rotavirus : ロタウイルス

diarrhea : 下痢

eradication : 撲滅

問 1 本文中で述べられている MIC の定義を 40 字以内の日本語で答えなさい。

問 2 下線部(1)の要因のうち、

A) MICs におけるワクチン接種者の割合を減らす要因として本文中で詳述されているもので最も適切な単語を 2 つ選び英語で答えなさい。

B) 上の問で解答した要因が具体的にどのように関わり合っているか 30 字以内の日本語で説明しなさい。

問 3 下線部(2)を 80 文字以内で日本語に訳しなさい。

問 4 下線部(3) project は複数の意味を持つ。(3)と同じ意味で使用されている文章を全て選びなさい。

- A) She liked to project herself more as a friend than a doctor.
- B) I noticed a slip of paper projecting from the book.
- C) We project that our life will be better next year.
- D) It is rare that a young girl could project such depths of emotion.
- E) This year's spending was projected at \$72, 000, 000.
- F) Seeds are projected from the tree.

問 5 (ア)と(イ)に入る接続詞を下の括弧内から選びなさい。同じ単語を2度使用しても良い。

[As Now Therefore Unless Yet Because Although]

問 6 下線部(4)の示す状態に至る理由を60字以内の日本語で答えなさい。

問 7 下線部(5)の括弧内の単語を文意に合うように適切に並び替えなさい。

問 8 MICsにおけるワクチン問題を改善するために必要とされているものを下の選択肢から全て選びなさい。

- A) Gavi should change the definition of MICs.
- B) Rich countries should buy vaccines for MICs with marginalized communities.
- C) The prices of vaccines should be regulated based on the wealth of the country.
- D) MICs should focus on growing economies to buy more vaccines.
- E) Vaccines should be produced in MICs to lower the costs.
- F) Slums in MICs should be aided by information technologies.
- G) MICs should introduce new vaccines that drastically reduce death and disease rates.

問題Ⅳ

Read the topic carefully. Write your answer in English in 120-150 words.

Japan will host the 2020 Olympics in Tokyo. What do you think the advantages and disadvantages will be for Japan and the Japanese people? Explain your opinion in detail.

