

[問題 I] 次の英文を読んで、下の設問に答えなさい。

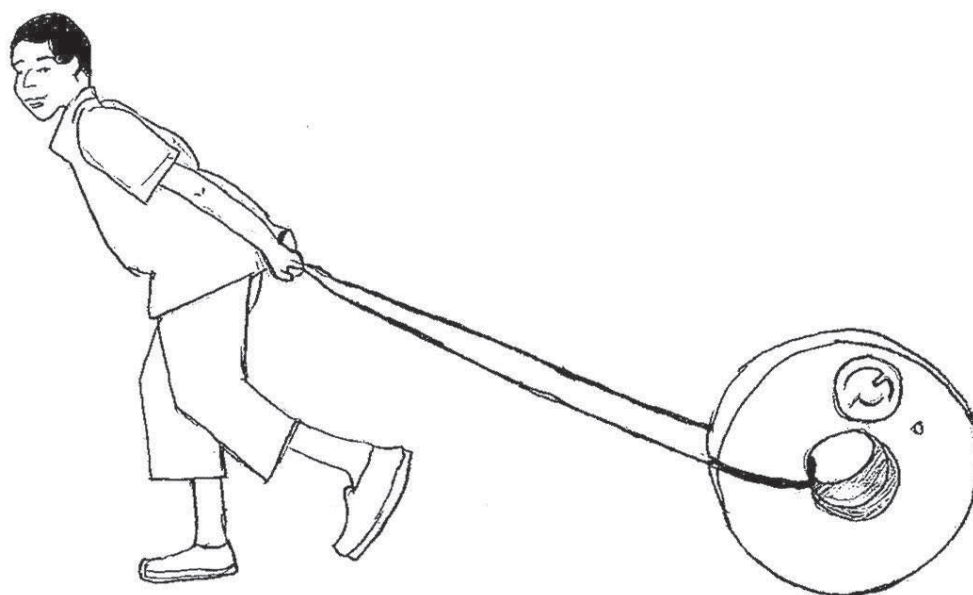
Can simple ideas change the world? They just might, one new idea at a time. Creative designers and scientists are working to invent products for communities in developing countries. (1) Some of their innovations might solve even the biggest problems, such as improving access to clean water and healthcare.

## Water Container

[A] Clean drinking water is one of the world's most valuable resources. Without it, people get sick and die. [B] In poor, rural areas, people often have to walk several kilometers to get clean water for cooking, cleaning, and drinking. [C] They usually have to carry heavy containers of water on their heads. Most of them make several trips each day to collect water. [D] This is difficult work, especially for women and children.

A South African engineer, Piet Hendrikse, came up with

図 1.



七篠奈津美 制作

a simple and inexpensive solution to the problem of carrying water: the Q Drum. The Q Drum stores up to 50 liters of water in a rolling container. Made of strong plastic material, it can roll over any kind of ground, no matter how rough. (2)—even young children—can easily pull the drum with an attached rope. With this innovation, people in developing countries can carry more clean water per journey with less effort.

### **Infant Warmer**

More than 20 million low-birthweight babies are born every year, many of them in developing countries. These babies weigh less than 2.5 kilograms when they're born. Low-birthweight babies often have difficulty staying warm. Many get too cold and die.

To solve this problem, American entrepreneur Jane Chen and a team of people invented the Embrace infant warmer. It looks like a small sleeping bag and is specially designed to help keep babies warm. It's filled with wax that easily heats up to 37 degrees Celsius—the normal human body temperature. Another benefit of the Embrace infant warmer is that it can work without electricity. It's an easy-to-use, low-cost solution. To date, this simple invention has helped save more than 450,000 babies worldwide.

### **Clay Floor**

More than one billion people around the world have dirt floors in their homes. Dirt floors are hard to clean, so a portion of anything dropped on the floor stays on it. As a result, there are a lot of germs and parasites in the floors, which can lead to disease for the people living in the homes. The best flooring option is concrete, but concrete is expensive. In Rwanda—where 75 percent of the population has dirt floors—a family

would have to pay more than two months' of their income for a concrete floor.

Gayatri Datar, a graduate from Stanford Business School, wanted to find a cheaper and healthier flooring alternative. She started a nonprofit called EarthEnable. The company sells a floor made of locally sourced clay, pebbles, and sand. It costs about \$70 per home—that's 25 percent of the cost of concrete. So far, EarthEnable has installed flooring in over 15,000 homes in Rwanda. The floors are already saving people's lives, dramatically reducing disease and parasitic infections. Soon, EarthEnable hopes to install new floors in Uganda and Kenya, too.

*Cengage Learning Inc. Reproduced by permission. www.cengage.com/permissions*

[注]

innovation = 改善のために発明されたもの

container = 容器

entrepreneur = 起業家

germs = ばい菌

parasites, parasitic = 寄生虫、寄生の

clay = ねんど

pebbles = 小石

infection = 感染

1. 本文の主要な考えは、どれか。その番号をマークしなさい。

1
---

- (1) Healthcare is the most important issue facing developing countries.
- (2) New technologies are too expensive for people in developing countries.
- (3) Scientists from foreign countries can help solve problems in developing countries.
- (4) Not very complex inventions can solve major problems in developing countries.

2. 下線部(1)と同じ内容を示す文は、次のうちどれか。その番号をマークしなさい。

2

- (1) These innovations can only solve small problems such as access to clean water and healthcare.
- (2) Despite solving big problems, these innovations will not improve access to clean water and healthcare.
- (3) Access to clean water and healthcare are examples of big problems that could be improved by these innovations.
- (4) Access to clean water and healthcare are never likely to be improved by these innovations.

3. 以下の文は、第2パラグラフの [A] [B] [C] [D] のどこに入れるのが最もふさわしいか。その番号をマークしなさい。

3

**But getting clean water can be difficult for many people in developing countries.**

- (1) [A]
- (2) [B]
- (3) [C]
- (4) [D]

4. 単語 **cheap** とほぼ同じ意味の単語を本文中から抜き出して書きなさい。

記述式解答用紙に書くこと

5. 図1を見てください。この図で示されている物の目的は、何か。その番号をマークしなさい。

4

- (1) smoothing floors
- (2) carrying water
- (3) warming wax
- (4) pulling tires

6. 第3パラグラフの下線部(2)に入れるべき最も適当なものを下に与えられたものの中から選び、その番号をマークしなさい。

(1) No one

5

(2) Someone

(3) Another person

(4) Anyone

7. 本文によると、Jane Chen らの発明の目的は何か。その番号をマークしなさい。

6

(1) to avoid using electricity

(2) to help low-birthweight babies gain weight

(3) to help low-birthweight babies stay warm

(4) to provide a place for low-weight babies to sleep

8. 本文によると、EarthEnable の床がコンクリートよりもよい理由は何か。その番号をマークしなさい。

7

(1) Compared to concrete floors, they are cheaper.

(2) Compared to concrete floors, they are stronger and last longer.

(3) Compared to concrete floors, they are easier to clean.

(4) Compared to concrete floors, they can be installed in many homes quickly.

9. 次の各文で本文の内容に一致しているものには 1 を、一致していないものには 2 をマークしなさい。

(1) In poor areas, water sources are typically far from where people live.

(2) The Q Drum was invented in South Africa to lower the cost of concrete floors.

(3) Babies are considered low-birthweight if they weigh less than 2.5 kilograms at birth.

(4) Rwandan families need to pay more than twice their monthly income for a concrete floor.

(5) EarthEnable imports most of its materials from outside Africa.

(6) EarthEnable has already expanded its new floors into Uganda and Kenya as well.

10. 本文のタイトルとしてふさわしいものは、次のうちどれか。その番号をマークしなさい。

- (1) Developing Countries
- (2) Simple Solutions
- (3) Foreign Inventions
- (4) Life Without Electricity

[問題Ⅱ] 次の会話を読んで、下の設問に答えなさい。

A: Hey, take a look at my new smartphone. It just came out this weekend.

B: Wow, it looks amazing! (1)\_\_\_\_\_?

A: Well, I can have interesting conversations using the smartphone's AI.

B: Sure. It is also good for (2)\_\_\_\_\_. For instance, I ask the AI on my phone for good places to eat and directions.

(3)\_\_\_\_\_?

A: I use an AI application to practice English every day. My English (4)\_\_\_\_\_.

B: Your English does sound better. Does it even correct your grammatical mistakes?

A: Yes, it does. I feel though like AI is controlling our lives.

B: Even if technology helps us, we should not let it (5)\_\_\_\_\_ our lives. AI users are still the boss.

1. 下線部 (1) に入れるべき最も適切なものを下に与えられたものの中から選び、その番号をマークしなさい。

15

- (1) How much is it worth
- (2) What do you like about it
- (3) Where did you get it
- (4) What are its shortcomings

2. 下線部 (2) に入れるべき最も適切なものを下に与えられたものの中から選び、その番号をマークしなさい。

16

- (1) searching information
- (2) slowing us down
- (3) drawing pictures
- (4) studying math

3. 下線部 (3) に入れるべき最も適当なものを下に与えられたものの中から選び、その番号をマークしなさい。

17

- (1) Who else likes using AI
- (2) How can AI do this
- (3) Why should I use AI
- (4) What else can AI do

4. 下線部 (4) に入れるべきものとして最もふさわしくないものを下に与えられたものの中から選び、その番号をマークしなさい。

18

- (1) is improving quickly
- (2) has been advancing
- (3) is more fluent now
- (4) has stayed the same

5. 下線部 (5) に入れるべき最も適当なものを下に与えられたものの中から選び、その番号をマークしなさい。

19

- (1) enrich
- (2) take over
- (3) upgrade
- (4) take after

[問題Ⅲ] 次の各文の空所に入れるべき最も適当なものをそれぞれに与えられたものの中から選び、その番号をマークしなさい。

1. The train was delayed (            ) the earthquake. 

20
----

- (1) because
- (2) as to
- (3) owing
- (4) because of

2. When it began raining, she kindly offered (            ) me to the station. 

21
----

- (1) drive
- (2) driving
- (3) to drive
- (4) to have driven

3. I didn't like green peppers as a child because my parents (            ) me eat them every day. 

22
----

- (1) made
- (2) let
- (3) forced
- (4) got

4. My parents hate (            ) in the house because the walls will turn yellow. 

23
----

- (1) my smoke
- (2) my smoking
- (3) me smoke
- (4) I smoke

5. Passing the test was much more difficult than I ( ).

(1) had thought

24

(2) have thought

(3) is thinking

(4) think

6. I ( ) in Hokkaido. I am working as a police officer in Tokyo now.

25

(1) was bringing up

(2) was brought up

(3) was grown up

(4) raised

7. Let's go to the ( ) to buy a birthday present for the party.

26

(1) new opening department store

(2) department store newly open

(3) newly opened department store

(4) opening new department store

8. I am so ( ) because this is my first visit to Paris.

(1) excite

27

(2) exciting

(3) excitement

(4) excited

[問題 IV] 日本語と同じ内容の英文になるように空所に入る英語を3単語で答えなさい。

1. 部屋を出るときは必ずドアの鍵をかけてください。

Please (        ) (        ) (        ) lock the door when you leave the room.

記述式解答用紙に書くこと

2. 彼女はとても有能なので、すぐに課長に昇進するにちがいません。

Since she is very capable, she (        ) (        ) (        ) to manager soon.

記述式解答用紙に書くこと

3. ここから最寄り駅までは歩いてどれくらいの時間がかかりますか。

How long (        ) (        ) (        ) to walk to the nearest station?

記述式解答用紙に書くこと

英語
----

解答例

問題 I	解答
1	④
2	③
3	②
4	②
5	④
6	③
7	①
8	①
9	②
10	①
11	①
12	②
13	②
14	②

問題 III	解答
20	④
21	③
22	①
23	②
24	①
25	②
26	③
27	④

問題 II	解答
15	②
16	①
17	④
18	④
19	②

記述式

問題 I	解答例
4	inexpensive

問題 IV	解答例
1	be sure to
2	must be promoted
3	does it take