山口大学 前期

平成 28 年度 入学者選抜学力検査問題

芝 請

注 意 事 項

- 1 試験開始の合図があるまで、問題冊子及び解答用紙の中を見てはいけません。
- 2 解答用紙は2枚あります。
- 3 試験中に問題冊子の印刷不鮮明,ページの落丁・乱丁及び解答用紙の枚数の過 不足や汚れ等に気がついた場合は、手を挙げて監督者に知らせてください。
- 4 試験開始後、すべての解答用紙に受験番号、志望学部及び氏名を記入してください。受験番号の記入欄は各解答用紙に2箇所あります。
- 5 解答はすべて解答用紙の指定された解答欄に記入してください。
- 6 問題冊子の余白は適宜使用してください。
- 7 各問題の配点は200点満点としたときのものです。
- 8 試験終了後、問題冊子は持ち帰ってください。

I Read the following text and answer the questions in English. (配点 58)

Connecting ideas that do not naturally go together is the characteristic of innovative* scientific research. Scientists who are able to do this are the ones who make the really important discoveries. Michele Barry, the Head of Global Health at Stanford*, spends a good part of her time in the developing world trying to get to the root cause of diseases in order to wipe them out. While in Bangladesh she discussed with Bangladeshi investigators why pregnant women in the region have a much higher rate of dangerously high blood pressure. The answer was not obvious at all. However, she and her colleagues are now trying to connect this illness to the rising sea level in the country. The land in Bangladesh is sinking, causing ocean water to get into the rice fields. As a result, the rice has a higher salt content. Since pregnant women often suffer from salt retention*, this increase in salt in their diet may lead to higher blood pressure. This is also a great example of how two important issues — global warming and public health — are connected with each other.

Another example from scientific research comes from Robert Lane and Gary Quistad, of UC-Berkeley*, who were investigating Lyme disease* in northern California. It was a real mystery why there are small regions in the Bay Area with a lower rate of Lyme disease. There are just as many ticks*— the carrier for this disease — across all the regions, but some ticks appear to be immune* to the disease. By looking beyond the obvious, Lane and Quistad realized that there are many more blue-belly lizards* in the regions where there is a low rate of Lyme disease. It turns out that the lizards are naturally immune to Lyme disease. So if a tick consumes the blood of a lizard of that kind, the Lyme disease in its system is destroyed. With a large number of lizards in a region, it is much more likely that a person there will be bitten by a tick that has already bitten a lizard and is now immune. This surprising and important finding was only revealed because the scientists were willing and able to connect seemingly unrelated observations and patterns.

Ideas can be drawn from anywhere and connected at any time. Mir Imran, the founder and chairman of InCube Labs, draws inspiration for his medical inventions by connecting and combining discoveries from a wide range of unrelated sources, including scientific studies, patients, physicians, and even his own personal experiences. For example, in 2000 he became ill with Guillain-Barré syndrome (GBS), in which the body's immune system attacks its own nervous system, leading to muscle weakness and paralysis*. Mir was literally a quadriplegic—unable to use his arms and legs—for many months, but he eventually recovered. Eight years later his mother was found to have ovarian cancer*. Mir was not focused on developing cancer treatments, but he couldn't stop thinking about the connection between the two diseases. In GBS, the immune system attacks specific cells in the person's own body. Mir wondered if the body could create an immune response to its own cancer cells. Along with others, he is working on a new treatment for cancer that involves removing a few cancer cells from patients and creating specially designed pathogens* that can be put back into them to cause an immune response to the cancer in the patient's body. Once he put these puzzle pieces together, it seemed obvious. In time we will see if these observations and connections lead to more effective cures for cancer.

(Adapted from Seelig, T., inGenius: A Crash Course on Creativity, HarperOne, 2012.)

*注

innovative: 革新的な, 刷新的な

Global Health at Stanford: スタンフォード大学グローバル・ヘルス・イノベー

ション・センター

retention: 保持, 停留

UC-Berkeley: カリフォルニア大学バークレー校

Lyme disease: ライム病

tick: ダニ

immune: (伝染病・毒などに) 免疫のある, 免疫性の

lizard: トカゲ

paralysis: 麻痺

ovarian cancer: 卵巣ガン

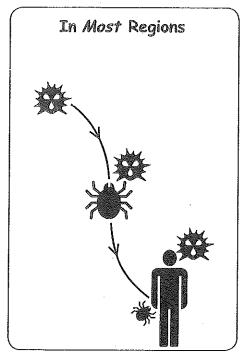
pathogen: 病原体

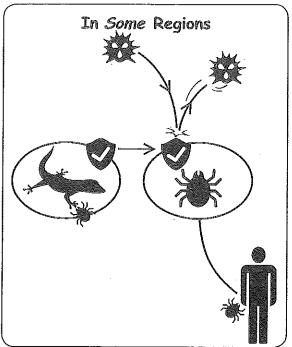
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1. Fill in the blanks in the following passage. Use as many words as you want for each blank.

According to the first paragraph	, global warming and public health are connected
with each other. For example, the rice	e in Bangladesh contains (1)
because of (2)	and this causes a greater number of pregnant
women in Bangladesh to (3)	

2. Referring to the text and the diagram below, complete the following summary in twelve English words or less, to explain why a lower rate of Lyme disease is reported in some regions of the Bay Area.





In most regions of the Bay Area, ticks get infected by Lyme disease and infect humans when they bite them. But in some regions of the Bay Area, there are more blue-belly lizards which are protected from Lyme disease.

So these ticks don't infect humans when they bite them.

3. Choose the answer that best describes the meaning of the phrase 'Guillain-Barré syndrome.'
(a) the technical term used to describe the characteristic relationship between incurable diseases
(b) the technical term to indicate how cancer cells develop and destroy the immune system
(c) the technical term used to describe a physical disorder affecting the nervous system
(d) the technical term used to describe how the immune system responds to disease using its own cancer cells
4. Fill in the blanks in the following passage to summarize the whole text. Use as many words as you want for each blank.

_____ ideas that are seemingly (2)_

key to many (3)_____

It is very late. The street is quiet and the house is dark. I climb the steps softly, skipping the ones that make a noise. I let myself in with my key and walk to my room on my toes. I remove my clothes and remember that I am thirsty. In my bare feet I walk to the kitchen. Before I reach it I know he is there.

I can see the deeper darkness of his shape. He is sitting in the same chair, his elbows on his knees, his cold pipe in his teeth, his eyes staring straight ahead. He does not seem to know I am there. He did not hear me come in. I stand quietly in the doorway and watch him.

Everything is quiet, but the night is full of <u>little sounds</u>. As I stand there motionless I begin to notice them. The alarm clock on the icebox. An automobile passing many blocks away. Papers moved along the street by the breeze. A whispering rise and fall of sound, like low breathing. It is strangely pleasant.

The dryness in my throat reminds me. I step briskly into the kitchen.

"Hello, Pop," I say.

"Hello, son," he says. His voice is low and dream-like. He does not change his position or shift his gaze.

I cannot find the tap. The shadow of light that comes through the window from the street lamp only makes the room seem darker. I reach for the short chain in the center of the room. I snap on the light.

He straightens up suddenly, as though he has been struck. "What's the matter, Pop?" I ask.

"Nothing," he says. "I don't like the light."

"What's the matter with the light?" I say. "What's wrong?"

"Nothing," he says. "I don't like the light."

I snap the light off. I drink my water slowly. I must take it easy, I say to myself. I must get to the bottom of this.

"Why don't you go to bed? Why do you sit here so late in the dark?"

"It's nice," he says. "I can't get used to lights. We didn't have lights when I was a boy in

Europe."

My heart skips a beat and I catch my breath happily. I begin to think I understand. I

remember the stories of his childhood in Austria. I see the wide-beamed kretchma*, with my

grandfather behind the bar. It is late, the customers are gone, and he is almost asleep. I see the

bed of glowing coals, the last of the roaring fire. The room is already dark, and growing

darker. I see a small boy, sitting on a pile of little logs at one side of the huge fireplace, his

starry gaze fixed on the dull remains of the dead flames. The boy is my father.

I remember the pleasure of those few moments while I stood quietly in the doorway

watching him.

"You mean there's nothing wrong? You just sit in the dark because you like it, Pop?" I

find it hard to keep my voice from rising in a happy shout.

"Sure," he says. "I can't think with the light on."

I set my glass down and turn to go back to my room. "Good night, Pop," I say.

"Good night," he says.

Then I remember. I turn back. "What do you think about, Pop?" I ask.

His voice seems to come from far away. It is quiet and even again. "Nothing," he says

softly. "Nothing special."

(Adapted from "My Father Sits in the Dark" by Jerome Weidman from Irving Howe and Ilana

Wiener Howe, Short Shorts: An Anthology of the Shortest Stories, Bantam Books, 1982.)

*注

kretchma: 酒場を意味するイディッシュ語

— 7 —

設 問

- 1. 下線部①の理由として、適切だと思われるものを以下の中から2つ選びなさい。
 - (a) 息子はいろいろ工夫して音を立てないようにしていたため
 - (b) 夜が更け始め、父親はうとうとし始めていたため
 - (c) 台所のドアが閉まっていて、小さな音に気づきにくかったため
 - (d) 父親は思いを巡らしていたため
- 2. 下線部②の 'little sounds' が何を指しているのか、具体例を日本語で3つ書きなさい。
- 3. 下線部③の動作の目的を日本語で答えなさい。
- 4. 下線部④を日本語に訳しなさい。
- 5. 英文の内容に合致するように、以下の説明文を完成させなさい。

息子は父の様子が変え	だと感じていたが,	その理由が,	父が若かった頃は
(1)	ため,今でも(2)	の方が
(3)	ことができるカ	からだと知り安	心している。

Ⅲ-1 次の場面では、3人の20歳の留学生が空手道場の生徒募集広告を見て、参加するかどうかを話し合っています。以下の広告と会話を読み、文脈に合うように(1)~(7)の空欄を英語で埋めなさい。(配点49)

Karate Gym: Free Trial Period

Sugahara Karate Training Gym invites participants of any age (over 5 years) or nationality to weekly karate lessons, between 6pm-7pm for juniors under 19, and 7:15pm - 8:15pm for those 19 or over. Participants at all levels, from beginners to experts, are welcome.

We practice karate forms for 30 minutes, including stretching and strength training, and sparring for 30 minutes wearing leg pads and gloves.

Lesson fees are 4,000 yen per month for adults, and 2,000 yen per month for juniors. New participants are welcome to come and try out karate for three weeks at no cost. Please contact Kenji Sugahara on 083 85x 85x5.

Dan:	This looks fun. How about if we go and give it a try?			
Kate:	"Give it a try"! Didn't you say you had a black belt in karate?			
Sue:	Yeah, Dan, you told me that too. (1) for years!			
Dan:	Yes, I have, but I meant why don't we give this gym a try? You'd			
	enjoy it.			
Kate:	I have never done it before.			
Dan:	It does not matter. You don't need to be skilled like me, it says you			
	(2)			
Kate:	True. I missed that bit. Even so, I think that I would soon get tired.			
Dan:	But not for long, we'll get bigger muscles because (3)			
Sue:	Another thing is, I won't understand a word that anyone is saying.			
Dan:	But it says people (4)			
	so it probably means Japanese is not necessary.			
Sue:	Unless they are assuming that everyone can learn to speak Japanese.			

Dan: I can help you with that if you are worried.

Sue: I am more worried about it hurting.

Dan: Well, it says that (5)

Kate: But I don't want to buy them until (6)

Dan: For those three weeks, I am sure someone will lend them to you.

Sue: We'll be coming back a bit late at night in the dark.

Kate: (7)________

Dan: And that would be half the price, but, let's be realistic, we are too old, so... if we all come back together, it will be safe enough.

Kate: Okay, you persuaded me.

Sue: But hey, Kate, didn't you say that your parents worry about anything even slightly dangerous?

Kate: Yes, you are right....

Ⅲ-2 Kate は両親に空手をやりたいということを伝える以下のメールを書いています。 指示に従って空欄(1)~(4)を埋めなさい。答えは解答用紙に英語で記入しなさい。 (配点 28)

最初に、空欄(1)に今回のメールの用件を書きなさい。

空欄(2)にはAかBのどちらか1つの利点を選んで書きなさい。

A: 異文化体験 B: 日本人との交流

また、空欄(3)にはCかDのどちらか1つの利点を選んで書きなさい。

C:礼儀向上 D:護身術習得

最後に、心配しないように、空欄(4)には通訳できる人と同行すると書きなさい。

Dear Mum and Dad				
I am fine and having a good time studying in Japan. (1) I				
There is no need to worry because it.				
is safe and it does not cost much.				
And it has lots of advantages. For example,				
(2) I				
CHARLES CONTROL TO THE CONTROL OF TH				
(3) Also I				
And to be sure that there are no language problems,				
(4) I . Don't worry.				
I will send some photos of me practicing karate in my next email.				
Love,				
Kate				