〔1〕 次の英文を読んで，文中の(ア)～(コ)に入れるのに最も適当な英語一語をそれぞれ書きなさい。

The National Cancer Center*1 predicts that 882,200 people will get cancer this year in Japan, while 367,100 people will die of the disease.

The figures compare (ア) a previously estimated 805,236 patients in 2010 and 360,963 actual deaths in 2012, the center said. The increase is mainly because of the aging of the population.

The center said this is the first time it has predicted a current year, based on data it has gathered (イ) 1975.

"We would like the latest picture of the situation to be used as a reference when thinking about future measures against (ウ)," a center official said. It usually requires a few years to assemble data for a single year.

The most (エ) type of cancer for 2014 is stomach cancer, estimated to affect 130,700 people. This variety of tumor,*2 however, is on the decline over the long term when the aging factor is discounted, it said.

Lung cancer is the (オ) most common, predicted to hit 129,500 people, followed by colon*3 cancer with 128,500 patients. The center anticipates that there will be more patients with lung and colon cancers than (カ) cancer in the near future.

The most common types of cancers among men are those of the stomach, lung and prostate,*4 in that order. For (キ) they are breast, colon and stomach.

Lung cancer kills the most people and is projected to kill 76,500 people, (ク) with 50,300 for stomach cancer and 49,500 for colon cancer.

Hard-to-treat pancreatic*5 cancer ranks (ケ) in the 2014 death count estimate. It overtook fifth-ranked liver*6 cancer, which was listed fourth in the 2012 ranking.

Pancreatic cancer is (コ) the rise even when excluding the impact of aging, the center said. Diabetes*7 and smoking are considered to be the main risk factors behind it.

【Adapted from "Cancer Cases for This Year Projected," *The Japan Times*, July 12, 2014】

〔注〕 ＊1 National Cancer Center：国立がんセンター
＊2 tumor：腫瘍
＊3 colon：結腸
＊4 prostate：前立腺
＊5 pancreatic：膵臓の
＊6 liver：肝臓
＊7 diabetes：糖尿病

〔2〕 次の英文を読んで設問に答えなさい。

Why is the word "FREE!" so attractive? Why do we have an irrational[*1] desire to acquire a FREE! item, even when it's not what we really want?

I believe the answer is this. FREE! stimulates our emotions so strongly that we perceive what is being offered as much more valuable than it really is. Why? I think it's because humans are naturally afraid of loss. The real attraction of FREE! is connected to this fear. There's no visible possibility of loss when we choose a FREE! item, but when we choose an item that costs money there's a risk of having made a poor decision — the possibility of a loss. Therefore, when we have a choice, we select what is free.

For this reason(1), in the concept of prices, zero is not just another price. Sure, a reduction in price can make a big difference in demand, but nothing is stronger than the emotional excitement of FREE! This, the *zero price effect,* is a unique phenomenon.

To be sure, "buying something for nothing" is a bit of a contradiction. But let me give you an example of how we often fall into the trap of buying something we might not want, simply because of that word, FREE!

In 2007, I saw a newspaper advertisement from a major maker of electrical products, offering me seven FREE! DVDs if I purchased the maker's newest model DVD player. First of all, did I need a new player at that time? Probably not. But even if I had, wouldn't it have been wiser to wait for the price to descend, as prices always do(2)? Second, the DVD maker had a clear scheme behind its offer. This company's new DVD system was in fierce competition with Blu-Ray technology. At the time, Blu-Ray was winning and has since gone on to dominate the market. So would the offer of FREE! DVDs really have been a good deal when the machine might soon become obsolete?[*2] Those are two rational thoughts that might prevent us from falling into the trap of FREE!

Getting something FREE! is certainly attractive when we talk about prices. But what would happen if the offer was not a free price, but a free exchange? Are we as susceptible[*3] to free products as we are to free prices? A few years ago, when Halloween was drawing near, I had an idea for an experiment(3) to investigate that question.

Early on Halloween evening, Joey, a nine-year-old kid, came to my front door. After the traditional greeting, "Trick or treat," I placed three Hershey's Kisses[*4] in his hand and asked him to hold them there for a moment. "You can also get one of these two Snickers bars,[*5]" I said, showing him a small one and a large one. "In fact, if you give me one of those Hershey's Kisses, I will give you this smaller Snickers bar. Or if you give me two of your Hershey's Kisses, I will give you this larger Snickers bar."

Kids are not stupid. The small Snickers bar weighed about 28 grams, and the large Snickers bar weighed about 56 grams. All Joey had to do was give me an additional one of his Hershey's Kisses (about 4 grams) and he would get an extra 28 grams of Snickers. For a nine-year-old boy, the calculation was easy: he'd get seven times the return on investment (in the weight of chocolate) if he took the larger Snickers bar. Joey immediately put two of his Kisses into my hand and took the 56-gram Snickers bar.

Joey wasn't alone in making this quick decision. All but one of the kids to whom I presented this offer traded in two Kisses for the bigger candy bars.

Zoe was the next kid to come to my house. I gave Zoe three Hershey's Kisses, but I had a different deal for her. I offered her a choice: she could get a large Snickers bar in exchange for one of her Hershey's Kisses, or she could get a small Snickers bar for free without giving up any Hershey's Kisses.

A bit of rational calculation would show that the best deal would be to decline the free small Snickers bar, pay the cost of one of the Hershey's Kisses, and receive the large Snickers bar. This logic was perfectly clear to Joey and the kids who encountered the condition in which both Snickers bars had a cost. But what would Zoe do? Would she make that rational choice — or would the fact that the small Snickers bar was FREE! blind her to the rationally correct answer?

As you might have guessed by now, Zoe, as well as the other kids to whom I offered the same deal, was completely blinded by FREE! About 70 percent of them took the worse deal just because it was FREE!

You might think that only kids would be tricked like this, but we repeated the experiment with university students and got the same results. Indeed, the attraction of zero cost is not limited to deals involving money. Whether it's products or money, we just can't resist the temptation of FREE!

【Adapted from *Predictability Irrational,* by Dan Ariely, HarperCollins, New York, 2009, pp. 60-64】

〔注〕 ＊1 irrational：理性を失った，分別のない

＊2 obsolete：すたれた，時代遅れの

＊3 susceptible：影響を受けやすい

＊4 Hershey's Kisses：ハーシーキス(チョコレートの銘柄)

＊5 Snickers bar：スニッカーズバー(チョコレートの銘柄)

〔設　問〕

1. 下線部(1)が指すことを，本文の内容に沿って日本語で書きなさい。

2. 下線部(2)について，had の後に省略されている内容と do が表している内容を具体的に示しながら，日本語に訳しなさい。

3. 下線部(3)について，Joey と Zoe への実験内容を，それぞれ本文の内容に沿って日本語で書きなさい。

4. 本文の内容に関する次の文(1)~(5)を読み，正しいものには○，間違っているものには×を，それぞれ記入しなさい。

(1) The *zero price effect* means that a free price is stronger than a reduction in price in its effect on our buying habits.

(2) Buying a DVD player and getting some DVDs for free would actually not be such a good deal if the buyer would soon want a Blu-Ray player, making the purchase of the DVD player a waste of money.

(3) One of the Snickers bars was smaller than two Hershey's Kisses.

(4) More than four-fifths of the kids didn't accept the better deal in the experiment that was carried out with Zoe.

(5) Getting something for free is attractive in terms of exchange items, according to the experiment with Joey.

〔3〕 次の英文を読んで設問に答えなさい。

If you are unable to think of an interesting, creative way to make a business presentation or begin a story, take a walk. The results of a recent study show that a brief walk, even around your office, can significantly increase your creative ability.

Most of us have heard by now that exercise, including walking, generally improves our thinking skills, both immediately and in the longer term. Several studies have shown that, after exercising, animals and people usually perform better on tests of memory and executive function,[*1] which is the ability to make decisions and organize thoughts. (1) We should also be aware that doing intense exercise for a long time can briefly cause our brain to get tired and function poorly, so we should be careful to avoid excessive exercise before an examination, but it is certain that moderate exercise benefits our brain.

There are many stories about a link between exercise and creativity,[*2] too, with writers and artists having said for centuries that they develop their best ideas during a walk. However, there is little scientific evidence to support the idea that exercise aids creativity, so researchers[*3] at Stanford University[*4] recently decided to test that possibility, inspired, in part, by their own walks. A research student said that she and her adviser would go for walks to discuss thesis topics, and one day she got the idea to examine whether walking really does have an effect on creativity.

With the enthusiastic support of her adviser, the researcher recruited a group of undergraduate students for (2) an experiment to see if she could stimulate their creativity. Gathering her volunteers in a deliberately dull, plain room with no equipment except a desk and (somewhat unusually) a treadmill,[*5] she asked the students to sit and complete oral[*6] tests of creativity, some of which involved tasks like rapidly saying alternative uses for common objects, such as a button. Then the students walked on the treadmill, at an easy, comfortable pace that they selected by themselves. The treadmill faced a blank wall. While walking, each student repeated the creativity tests, which required about eight minutes.

Almost every student had a substantial increase in creativity when they walked. Most of them were able to produce about 60 percent more uses for an object, and the ideas were both unique and appropriate.

If creativity were to increase only while someone was walking, that finding would seem to have no practical importance. Most of us cannot do any creative work on treadmills. So the researcher next tested whether the effects would continue after a walk had ended. She had another group of students sit for two successive sessions of test-taking and subsequently walk for about eight minutes while telling their ideas for uses of an object, then sit and repeat the

test.

Again, walking significantly improved people's ability to produce creative ideas, even when they sat down after the walk. In that case, the volunteers who had walked produced significantly more ideas than in their testing period before exercise, and, according to both the researcher and the students, those ideas were better.

Finally, to examine whether the results of walking and creativity could apply to the real world, portions of the experiment were moved to an outdoor space. Most people would probably guess that walking outside should be much better for creativity than walking inside a dull office, but, surprisingly, that assumption was proven to be wrong. When volunteers walked around Stanford's pleasant, green campus for about eight minutes, they produced more creative ideas than when they sat either inside or outside for the same length of time. But they were not especially more creative as a result of their outdoor walk than when, in a repeat of the experiment, they walked on an indoor treadmill, facing a blank wall. (3) It really seems that it's the walking that is important for stimulating creativity, and not the surroundings.

Just how a brief, casual walk alters the various mental processes related to creativity remains unclear, but the effect lasts for only a short time, making it distinct from any permanent physical changes that exercise might produce inside the human brain. The primary effect might be that walking improves mood, and creativity blossoms more easily within a positive mind. On the other hand, walking might change the direction of energy that otherwise would be devoted, by intention or not, to restraining*7 wild, creative thought. It's possible that walking allows the brain to break through some of its own rational controls.

But those are only a few of many likely explanations, the research student said, adding that she would probably go for a walk later to help her think of some other possible theories and creative experiments for testing them.

[Adapted from "Want to Be More Creative? Take a Walk," by Gretchen Reynolds, *The New York Times Online*, April 30, 2014]

〔注〕 ＊1 executive function：実行機能　＊2 creativity：創造力
＊3 researcher：研究者
＊4 Stanford University：米国カリフォルニア州にある私立大学
＊5 treadmill：(トレーニング用の)ルームランナー
＊6 oral：口述の　＊7 restrain：抑制する

〔設　問〕

1. 下線部(1)を日本語に訳しなさい。

2. 下線部(2)の実験内容を，本文の内容に沿って150字程度の日本語で書きなさい。

3. 下線部(3)について，このように考えられる理由を，本文の内容に沿って日本語で書きなさい。

4. 本文の内容に関する次の文(1)~(5)を読み，正しいものには○，間違っているものには×を，それぞれ記入しなさい。

(1) Although there is evidence that physical exercise improves memory, there is not much evidence that it improves creativity.

(2) A group of undergraduate students got the idea to examine whether walking affects creativity, and decided to test the possibility.

(3) Even after walking, our creative ability will remain as good as when walking.

(4) The effect of walking on creativity is assumed to be temporary because it does not cause changes in the structure of the brain.

(5) There are likely to be few explanations of how walking affects creativity.

〔4〕 (英作文)

科学技術の発達によって，今後社会の中で使用されなくなると思うものについて，その理由を述べたうえで，100語程度の英語で書きなさい。