

[A] 次の文章の (1) ~ (4) には、それぞれ a,b のどちらの語句が当てはまるか、記号で答えなさい。

When I was a small child, my mother explained to me that our nerve cells are the telephone wires of the body. But are they analog or digital? The answer is that they are an interesting mixture of both. A nerve cell is not like an electric wire. It is a long thin tube along which waves of chemical change pass, like a trail of gunpowder fizzing along the ground – [a. except that / b. in that], unlike a trail of gunpowder the nerve soon recovers and can fizz again after a short rest period. The absolute magnitude of the wave – the temperature of the gunpowder – may fluctuate as it races along the nerve, [a. and this is highly relevant / b. but this is irrelevant]. The code ignores it. Either the chemical pulse is there or it is not, like two discrete voltage levels in a digital telephone. To this extent, the nervous system is [a. analog / b. digital]. But nerve impulses are not dragged into bytes: they don't assemble into discrete code numbers. [a. Therefore / b. Instead], the strength of the message (the loudness of the sound, the brightness of the light, maybe even the analogy of the emotion) is encoded as the rate of impulses.

[B] 次の文章を読んで下の設問に答えなさい。

The notion that past memories endure in the brain, though in a somewhat less literal, less mechanical form, is an idea that haunts psychoanalysis – and the great autobiographers, as well. Thus Freud's favorite image of the mind was as an archaeological site, filled, layer by layer, with the buried strata of the past (but one where these layers may rise into consciousness at any time). And Proust's image of life was as “a collection of moments,” the memories of which are “not informed of everything that has happened since” and remain “hermetically sealed,” like jars of preserves in the mind's larder.

This notion of memory as a record or store is so familiar, so congenial, to us that we take it for granted and do not realize at first how problematic it is. And yet all of us have had the opposite experience, of “normal” memories, everyday memories, being anything but (A) – slipping and changing, becoming modified, whenever we think of them. No two witnesses ever tell the same story, and no story, no memory, ever remains the same. A story is repeated, gets changed with every repetition. It was experiments with such serial storytelling, and with the remembering of pictures, that convinced Frederic Bartlett, in the 1920s and 1930s, that there is no such entity as “memory,” but only the dynamic process of “remembering.”

1. (a) フロイトと (b) プルーストの二人は、脳に残る記憶のイメージをそれぞれどのようなものだとえているか、日本語で答えなさい。
2. 空欄 (A) に当てはまる単語を次の中から選び、記号で答えなさい。
a. ordinary / b. strange / c. shaky / d. fixed
3. Frederic Bartlett は、実験の結果、人間の記憶に関してどのような結論に達したか。「～ではなく～」という形で日本語で答えなさい。

[C] 次の文章を読んで下の設問に答えなさい。

Here was a race of creatures capable of removing portions of their anatomy at will. Eyes, arms – and maybe more. Without batting an eyelash. My knowledge of biology (1), at this point. Obviously they were simple beings, uni-cellular, some sort of primitive single-celled things. Being no more developed than starfish. Starfish can (2)do the same thing, you know.

i read on. And came to this incredible revelation, tossed off coolly by the author without the faintest tremor:

... (3)we split up. Part of us went inside, part over to the cafe for dinner.

Binary fission, obviously. Splitting in half and forming two entities. Probably each lower half went to the cafe, it being farther, and the upper halves to the movies. I read on, hands shaking. I had really stumbled onto something here. (4)My mind reeled as I made out this passage:

... I'm afraid there's no doubt about it. Poor Binary has lost his head again.

Which was followed by:

... and Bob says ⁽⁵⁾ he has utterly no guts.

1. 空欄 (1) に当てはまる語句を次の中から選び、記号で答えなさい。
 - a. proved insufficient
 - b. came in handy
 - c. was no longer reliable
 - d. turned out to be accurate
2. 下線部 (2) の意味を具体的に書きなさい。
3. 語り手である “I” は、下線部 (3) の意味をどのように取り違えたのか。次の文の空欄に適切な日本語を補って答えなさい。

– 正しくは「 (a) 」という意味で使われているのに、語り手は「 (b) 」という意味だと誤解した。
4. 下線部 (4) の意味に最も近いものを次の a ~ d の中から選んで、その記号を書きなさい。
 - a. I was extremely happy when I discovered this passage.
 - b. I was greatly inspired when I wrote this passage.
 - c. I felt quite dizzy when I understood this passage.
 - d. I was totally disappointed when I read this passage.
5. 語り手である “I” は、下線部 (5) の意味をどのように取り違えたのか。次の文の空欄に適切な日本語を補って答えなさい。

– 引用文中では「 (a) 」という意味で使われているのに、語り手は「 (b) 」という意味だと誤解した。

[D] 次の文章を読んで下の設問に答えなさい。

Ripples on a pond are examples of broken symmetry. An ideal mathematical plane has a huge amount of symmetry: every part of it is identical to every other part. You can translate the plane through any distance in any direction, rotate it through any angle about any center, reflect it in any mirror line, and it still looks exactly the same. The pattern of circular ripples, in contrast, has (1) symmetry. It is symmetric only with respect to (A) about the point of impact of the pebble, and (B) in mirror lines that run through that point. No (C), no other (A), no other (B). The pebbles breaks the symmetry of the plane, in the sense that after the pebble has disturbed the pond, many of its symmetries are lost. But *not all*, and that's why we see a pattern.

However, none of this is suprising, because of the pebble. You would be more surprised – a lot more surprised – if a perfectly flat pond suddenly developed a series of concentric circular ripples without there being any obvious (2). You would imagine that perhaps a fish beneath the surface had disturbed it, or that something had fallen in and you had not seen it because it was moving too fast. So strong is the ingrained assumption that patterns must have evident causes that when in 1958 the Russian chemist B. P. Belousov discovered a chemical reaction that (3) formed patterns, apparently out of nothing, his colleagues refused to believe him. They didn't bother checking his work: ⁽⁴⁾ he was so obviously wrong that checking his work would be a waste of time.

1. 空所 (1) に入れるのに最も適切な表現を選びなさい。
 - a. perfect / b. as much / c. more / d. less / e. no
2. 空所 (2) に入れるのに最も適切な語を同じ段落から探して答えなさい。(単数が複数かは問わない。)
3. 空所 (3) に入れるのに最も適切な表現を選びなさい。
 - a. positively / b. expectedly / c. willingly / d. spontaneously
4. 下線部 (4) は誰の考えを述べたものか。日本語で答えなさい。

5. 空所 (A),(B),(C) には次の三つの単語のうち、いずれかが入る。どの単語があてはまるかを、それぞれ記号で答えなさい。
- a. reflections / b. rotations / c. translations

[E] 次の各文 (1)–(5) には、余計な単語がそれぞれ一つずつ含まれている。正しく意味が通るために取り去るべき単語を書きなさい。

When and why did this footloose species take off from Africa? (1) **U**ndoubtedly, reasoned anthropologists, *H. erectus* made a breakthrough that they let it thrive in a much broader range of conditions than it was accustomed to. (2) **A**nd there was no direct evidence of a major technological advance that could plausibly have done the trick. (3) **E**xcavations of sites dating back 1.4 million years B.P., 4,000 centuries after *H. erectus* first appeared, were uncovered multifaceted hand axes and cleavers much more finely fashioned than the simple stone tools used before. (4) **T**hese high-tech implements are called Acheulean tools, shortly after the town of St. Acheul, in France, where they were first discovered. (5) **W**ith better tools, goes to the theory, *H. erectus* would have had an easier time gathering food.

以下はテープを聴いて答える問題です。

画面に画像が映ることはありません。

[F] Listen to the tape and answer the questions. The tape will be played twice.

1. Give the two English words that the speaker used to characterize Jan Breugel's(not Vermeer's) painting.
-() and ().
2. ブリュウゲルとフェルメールの絵の違いは、ヨーロッパで家の性格がどのように変化したことを反映しているか。次の空欄に適切な日本語を補って答えなさい。
-() であった家が() になったこと。
3. 2. の問いで答えたような家の性格の変化は、どのような歴史的变化に伴って生じたと言っているか。10字程度の日本語で答えなさい。

[G] Listen to the tape and answer the questions in English. The tape will be played twice.

1. Who produced the most reliable street maps of Moscow?
2. Who bought these maps? Answer in 2 words.
3. What made the falsification of maps meaningless? Answer in 3 words.
4. What was President Gorbachev's attitude toward the former government?
Choose the right answer.
a. He was largely favorable to its policies.
b. He approved of its policies except the misdrawing of maps.
c. He was largely critical of its policies.

[H] Listen to the tape and fill in the blanks. The tape will be played twice.

Franco Magnani was born and grew up in Pontito, but when he made this painting he was living in America and (1)_____ his birthplace for decades. He painted everything from memory. This is his Pontito, the village he lived in as a child in the 1930s and 40s.

In the first thirty years of his life, Franco (2)_____. But in 1965, when he was thirty-one, he came down with a strange illness. He (3)_____, lost weight and became very confused.

And he began to have dreams. Of Pontito. The dreams were extremely vivid. He saw the streets and houses of the village he'd loved so much, (4)_____.

Like most monster films for entertainment, the story of Mothra is pretty simple: life was peaceful in Infant Island before Civilization brought nuclear bombs. Here the West's destructive technology is (5)_____ the green harmony of a Polynesian paradise. From the West also comes the villain, who kidnaps the island's Little Twin Beauties (6)_____. Then Mothra, their Protector, hatches and comes to their rescue.

There's a question (7)_____: where are we, the Japanese, in this picture of the destructive West vs. the peaceful South Pacific? Do we (8)_____ of civilization, or are we somehow different from the Westerners and therefore, somehow, innocent?

[I] Listen to the lecture and answer the following questions in English. テープが流れる前に 30 秒ほどのポーズがあります。問を読んでおくこと。

1. Other than Newton's apple, two things are mentioned as having entered the folklore. What are they? Put one word in each blank.

()'s ()() and ()'s ().

2. According to Newton himself, what did he realize when he saw an apple and the moon? Answer in several words.

-He realized the same force that made the apple fall might explain why _____.

3. According to some historians, Newton may have invented the story about the apple because

- a. an apple has the same shape as the moon.
- b. he always ate a cooked apple late in the evening.
- c. he was worried about a rival scientist.
- d. he was influenced by the orbit of the moon.